

NATIVE BEES

Need Your Help



Industrial honeybee operations are threatening pollinators on our public lands

NATIVE BEE DIVERSITY



- America's arid Southwest is home to an astonishing number of native bee species: [1,300 species live in Arizona](#) alone, and over 1,100 in Utah.¹ They come in all manner of shapes, sizes, and colors. Most are solitary or live in small colonies.
- Native bees provide **important pollination services**, keeping our lands healthy, biodiverse, and full of blooms. Some species are also important crop pollinators.
- Already imperiled by habitat loss, pesticides, and climate change, our native bees are **now threatened on public lands** by a species we know and love—**HONEYBEES**.

HONEYBEES OUTCOMPETE NATIVE BEES

- Introduced to North America from Europe in the 1600s, honeybees (*Apis mellifera*) are a [managed, non-native](#) Eurasian species with hives 10,000-40,000 bees strong.²
- Honeybees consume **pollen and nectar** needed by native pollinators. In **a single summer, one honeybee hive consumes enough pollen** to raise **33,000 native bees**.³
- Scientists have shown that honeybee competition [negatively impacts](#) native bee foraging and [reproduction success](#).^{4,5}



HONEYBEES TRANSMIT DISEASES and PARASITES



Deformed Wing Virus [Klaas de Gelder, Flickr](#)

- Honeybees can also **transmit deadly diseases** to native bees.
- [Deformed-wing virus](#),⁶ [black queen cell virus](#),⁷ and other **harmful pathogens and parasites** have been transmitted.⁸
- In turn, honeybees can be vulnerable to native bee diseases.⁹

BAD NEWS for NATIVE PLANTS

- Honeybees being present alters wildflower communities. Some wildflower species require **specific native bee pollination skills** (such as buzz-pollination) for reproduction.
- When honeybees outcompete native bees, **they can negatively affect the reproduction of native plants**.¹⁰ Worse yet, honeybees have been shown to [preferentially pollinate](#) **(and thus increase) abundant, non-native invasive plants**.¹¹



COMMERCIAL HONEYBEE PERMITS on PUBLIC LANDS

- Despite the dangers of honeybees to native bees and plants, some U.S. Forest Service and Bureau of Land Management (BLM) managers are **granting permits to commercial beekeeping companies** to park **large collections of hives** (“apiaries”) on public lands.
- Without population baselines, most **native bee declines or disappearances will go unnoticed**. There is **no hope of effective monitoring** (it requires too much time, money, and expertise), and **no public notice**.
- Areas of high native bee diversity are currently threatened by proposals to park **millions** of managed honeybees **virtually for free** on our public lands. This is a poor substitute for longer-term, **less destructive alternatives** on private lands.



ABOUT PROJECT 1100

In 2020, Project Eleven Hundred was established as a small nonprofit to focus on ending the permitting of honey bee apiaries on national public lands, and to support the protection of native bee and plant diversity on public lands.



Donate at projectelevenhundred.org (or scan the QR code) to help native bees get the pollen they depend on, and native plants get the native bees they're designed for. We'll keep you informed of our progress.



Forest Service district rangers and BLM field office managers are the ones who decide whether to issue permits to honey bee operators. We inform these managers of the threats honey bee apiaries pose for native bees, and we encourage them to choose not to permit honey bee apiaries on the lands they manage. Project 1100 is the only organization focusing specifically on ending permitting of honey bee apiaries, though numerous scientists and other conservation organizations are partnering in this work.

- ¹ Buchmann et al., *Arizona Bee Identification Guide*. https://www.pollinator.org/pollinator.org/assets/generalFiles/AZ_bee_guide_FINAL.pdf Accessed 17 March 2020.
- ² Sheila R. Colla and J. Scott MacIvor, “Questioning public perception, conservation policy, and recovery actions for honeybees in North America,” *Conservation Biology* 31, no. 5 (2017): 1202–1204.
- ³ James H. Cane and Vincent J. Tepedino, “Gauging the effect of honey bee pollen collection on native bee communities,” *Conservation Letters* 10, no. 2 (2017): 205–10, <https://doi.org/10.1111/conl.12263>.
- ⁴ Rachel E. Mallinger, Hannah R. Gaines-Day, and Claudio Gratton, “Do managed bees have negative effects on wild bees?: A systematic review of the literature,” *PloS One* 12, no. 12 (2017): e0189268.
- ⁵ Torné-Noguera, Anna, Anselm Rodrigo, Sergio Osorio, and Jordi Bosch. “Collateral effects of beekeeping: Impacts on pollen-nectar resources and wild bee communities,” *Basic and applied ecology* 17, no. 3 (2016): 199–209.
- ⁶ M. A. Fürst et al., “Disease associations between honeybees and bumblebees as a threat to wild pollinators,” *Nature* 506, no. 7488 (2014): 364.
- ⁷ Wenjun Peng et al., “Host range expansion of honey bee Black Queen Cell Virus in the bumble bee, *Bombus huntii*,” *Apidologie* 42, no. 5 (2011): 650–658.
- ⁸ Dave Goulson and William Hughes, “Mitigating the anthropogenic spread of bee parasites to protect wild pollinators,” *Biological Conservation* 191 (2015): 10–19.
- ⁹ McMahon et al., “A sting in the spit: widespread cross-infection of multiple RNA viruses across wild & managed bees,” *Jour. of Anim. Ecol.* 84, no.3 (2015):615–624.
- ¹⁰ Magrath et al., “Honeybee spillover reshuffles pollinator diets and affects plant reproductive success,” *Nature Ecology & Evolution* 1, no. 9 (2017): 1299–1307.
- ¹¹ Morales et al., “Disruption of pollination services by invasive pollinator species,” in *Impact of Biological Invasions on Ecosystem Services* (Springer, 2017), 203–220.

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