4/2016

THE UNIVERSITY OF ARIZONA
COLLEGE OF AGRICULTURE AND LIFE SCIENCES
COOPERATIVE EXTENSION
Arizona Pest Management Center

Integrated Pest Management for Wild Honey Bees in Community Environments

Shaku Nair, Dawn H. Gouge, Shujuan Li, Peter Warren, Al Fournier, Michael Wierda, Kai Umeda, Dave Kopec

Pollinators are important and desirable elements in our natural environment. But wild honey bees can sometimes interfere with our activities or interests. When this happens the best course of action is to take an **integrated pest management (IPM)** approach.

Inspect and monitor your home and surroundings regularly (*http://cals.arizona.edu/apmc/docs/WildHoneyBeeIPM1.pdf*) for signs of honey bee activity. Confirm that you have honey bees and that they are posing a risk. There are many kinds of bees (Fig. 1) and bee-look-alikes. Many are beneficial or benign and do not necessitate action, e.g. bumblebees (Fig. 2-B), leaf-cutter bees and sweat bees; while others pose risks, e.g., yellowjackets (Fig.2-A).

Be aware of potential health risks and injury. It is important to be aware of stinging insect activity in an area before engaging in outdoor activities, particularly if individuals sensitive to stings are involved. Avoid contact with these insects as much as possible and teach children to do the same. Tragic loss of life has occurred when people intentionally irritated honey bees. Swarming or foraging wild honey bees are usually focused on the job at hand, and will not sting if left alone. However, they may react defensively to prolonged disturbance such as being poked with a stick, or water being thrown at them. Established colonies may be highly defensive and may respond in large numbers if provoked.

All wild honey bees in Arizona are 'Africanized', so treat them with caution.

Respond appropriately to honey bees around you. If you encounter bees buzzing around your head, place your hands over your face and look through gaps between your fingers (Fig. 3). Look around for signs a colony is close by, and walk briskly away from the area. **Do not flap or swat at the bees, this is the worst thing you can do!**

If you are stung or the bees bump you, cover your head and face with clothing or your hands and run to the nearest building, car or shelter, go inside and close the doors. If you are outdoors and not close to shelter, run at least 240 yards (the length of two football fields) or until the bees have abandoned you.

Do not dive into a swimming pool or river; the bees will wait for you longer than you can hold your breath!

Honey bee stingers get lodged in the skin and torn out of the bee's body along with the venom glands (Fig.4). This results in the death of the bee, but the stinger continues to release venom for several minutes. It is important to scrape off the stinger (or at least the venom gland) as soon as possible to reduce the amount of venom that enters the body. Prompt removal using any available means can greatly reduce the severity of the sting.

Figure 1. Western honey bee, *Apis mellifera*

Figure 2. Honey bee look-alikes

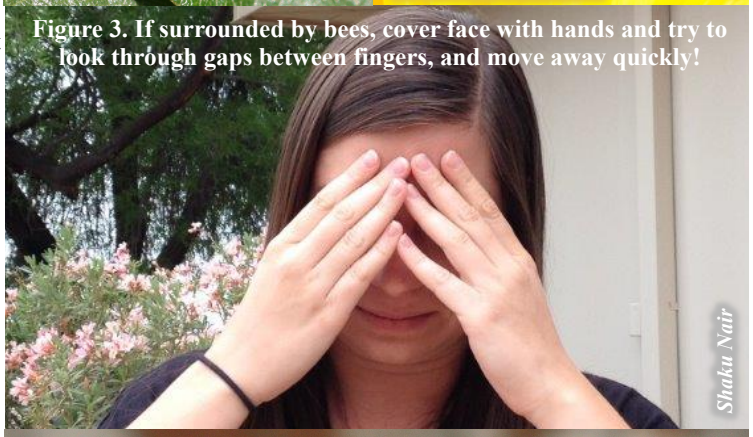

Figure 3. If surrounded by bees, cover face with hands and try to look through gaps between fingers, and move away quickly!

Figure 4. Honey bee stinger lodged in skin and separated from bee's body

Bee stings are painful, and the discomfort and swelling can last 2-3 days. Prolonged or severe reactions may occur in sensitive people, and this is the most significant problem. Most healthy adults can withstand several hundred bee stings, so fatalities due to toxic levels of venom are extremely rare.

Prevent bees from nesting in and around your home.
Honey bees need food, water and shelter to survive. Restricting access to suitable nesting sites will encourage them to go elsewhere to live.

Eliminate favorable nest sites

- **Do not attempt to seal holes or fill voids if bees are actively moving in and out of it** (Fig. 5).
- Fill holes ⅛ inch or larger in trees near structures or locations where bees cannot be tolerated. Tree voids may be filled with sand or mesh screen used to block entrance opportunities. Fill in rodent or animal burrows in the ground. Use a good quality silicone sealant to fill all cracks or gaps in walls, rooflines and around foundations.
- Remove backyard items that might serve as a shelter, such as overturned clay pots.
- Put mesh screening over rainspouts, chimneys and water meter boxes.
- Ensure that window and door frames fit tightly.
- Ensure that outbuildings or external sheds are kept well maintained and in good repair, and that doors close tightly. Exercise caution when entering buildings that are not used frequently.
- Ground-nesting bees can be discouraged by allowing the soil to dry out completely, and by mulching or planting a ground cover over large patches of bare ground. They can also be encouraged to abandon ground nests by turning a sprinkler on their homes.

Eliminate water sources

- Promptly repair leaks in outdoor water taps and irrigation systems.
- Educate children about bees around or caught in swimming pools.
- Monitor bird baths and pet water bowls (Fig. 6). If bees are using these as a water source, sometimes moving them to other locations can be helpful.

Eliminate food sources

- Gather and discard fruit dropped from trees.
- Cover food when eating outdoors, especially sugary, sweet-smelling foods and drinks. Honey bees can enter open soda cans (Fig. 7) and cause stings in and around your mouth!
- Keep trash receptacles covered or closed.
- Cover humming bird feeding points with coarse mesh to allow humming bird feeding but exclude bees.

Additional information

Gouge, D.H., Olson, C., Rehm-Bowler, M. Enriquez, N., Rodriguez, J.M. Bee Management. http://cals.arizona.edu/urbanipm/buglist/bees.pdf

Arizona Bee Identification Guide
http://pollinator.org/PDFs/AZ_bee_guide_FINAL.pdf

Africanized Honeybees B-Smart information and Safety Rules.
http://www.maricopa.gov/emerg_mgt/pdf/killerb.pdf


Figure 5. Honey bees near a nesting site in a tree cavity
JMK


Figure 6. Honey bees drinking from a bird bath
Cornelia Moore


Figure 7. Honey bee on an open soda can
Shaku Nair

Bee smart!
Do not try to remove honey bee colonies yourself!
NEVER shoot at, throw water, rocks, gasoline or other chemicals, burn or otherwise threaten colonies.
They are best removed by experienced professionals.

This material is based upon work that is supported in part by the National Institute of Food and Agriculture, U.S. Department of Agriculture (USDA NIFA) under the Crop Protection and Pest Management, Extension Implementation Program, award number 2014-70006-22488 which provides Extension IPM funding to the University of Arizona.

A PDF of this publication is available on-line at
http://cals.arizona.edu/apmc/docs/WildHoneyBeeIPM2.pdf