

THE AMERICAN BIOLOGY TEACHER



About Our Cover

The cover image is a honey bee (*Apis mellifera*) on blue porterweed (*Stachytarpheta jamaicensis*). One of the most recognizable insects in the world, the honey bee is vital for the pollination of flowering plants, including many food crops.

People often confuse beneficial honey bees with other insects in the order Hymenoptera, such as wasps, which include hornets and yellow jackets. The misconception of honey bees as dangerous or aggressive is unfortunate, considering our need to protect this important pollinator.

The term “colony collapse disorder” (CCD) was coined in early 2007, after beekeepers began reporting significant and startling hive losses. CCD now affects honey bees throughout the world and threatens our food production: it is said that 1 in every 3 bites of our food originates from flowers that honey bees pollinate. The exact nature of CCD remains unknown, but possible factors include pesticides, parasitic mites, viral and fungal pathogens, and climate changes that may reduce the nectar and pollen production of flowering plants.

Apis mellifera has more than 20 recognized subspecies, none of which are native to the Americas. Introductions of these subspecies date back to settlers in the early 1600s and include the arrival in the 1950s of the African honey bee, *Apis mellifera scutellata* (so-called “killer bees”), a subspecies that can interbreed with European subspecies. Although the African honey bee is known for defensive and aggressive behaviors, the benefits of this interbreeding include increased honey production and greater resistance to CCD.

Gardeners can help protect honey bees by propagating a diversity of flowering plants with different blooming seasons, limiting pesticide use, providing shelter opportunities, and increasing the availability of clean water.

The photographer is Professor Lisa Burgess-Scimeca from Broward College (Central Campus, Davie, FL; lburgess@broward.edu). She used a Canon EOS 5D with a Canon 100mm Macro Lens to capture this image in her backyard butterfly garden in southern Florida.

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