



The glowworm

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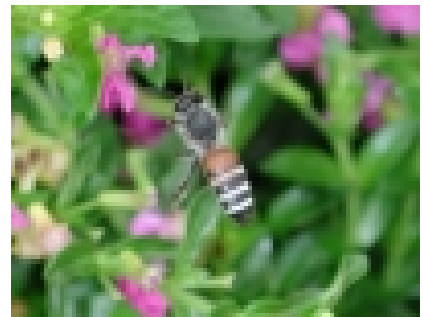
Happy New Year

It's really great to begin anew and January 1 helps us to do that every year. 2005 marks the beginning of the 13th year for the *Gloworm*. We've tried to cover insects of interest and keep our readers abreast of new and exciting things in the insect world. We'll try to do the same in 2005. If you have a suggestion for a feature or would like to contribute one, don't hesitate to send it in. In fact, after the December issue had gone to the printers, we got some nice contributions. There will be opportunity to use those during the year, so look for them.

Let's begin 2005 looking at Honey bees. The Bee Essay Contest is due in my office on January 15 and maybe this can act as a spur to all the procrastinators who need to write an ESSAY.



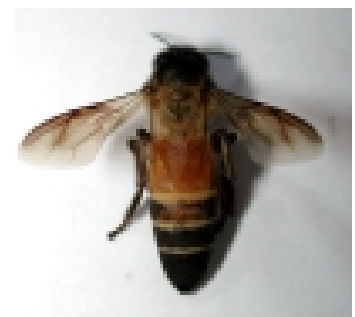
Honey bees came originally from Western Asia but probably moved into Europe and Africa, naturally. The common domesticated honey bee, *Apis mellifera*, has been introduced



throughout the world, so is found almost everywhere. There are three other species of the Genus *Apis*. They are *Apis cerana*, the Indian honey bee, *Apis florea*, the dwarf honey bee, and *Apis dorsata*, giant honeybee. These three are



found only in tropical Asia, though they look much like the honey bees with which we are familiar.



Size is one of the best distinguishing characters for the four species. All species are good for honey production, though the *A. dorsata* are not domesticated, but their comb and honey is prized. The Africanized Honey bee is a race of *A. mellifera*. *A. mellifera* has 24 different races. *A. mellifera ligustica* is the "Italian" bees and is perhaps the most common bees kept, although by and large, most bees kept in North America have become a mix of *ligustica* and a few other races. The Italian bees are golden yellow and winters in large populations, with a high consumption of honey during the winter. *A. mellifera scutellata* is the African bee, which was introduced into Brazil in 1957. This race is the most defensive race among all honey bees and will mass attack a human or animal with 500 to 5000 stings. Other races almost never do that. With that many stings a person will die (even if not allergic) due to venom toxicity, if not treated medically right away.

The first land-migrating swarm of Africanized bees was detected in the US on October 15, 1990. These bees were captured in a baited trap at the border town of Hidalgo, Texas. AHB colonies were first reported in Arizona and New Mexico in 1993 and Nevada in 1998. The first California discovery was in October of 1994; one year later Imperial, Riverside and northeastern San Diego counties were declared officially colonized. In 2004, AHB nests were discovered in Oklahoma and Alabama. Texas, New Mexico, Arizona, Nevada, California, Oklahoma and Alabama have reported Africanized honey bee finds. Many scientists believe Africanized bees will continue to spread and successfully overwinter in the US's southern tier.

Since it's winter and most buggy folks wonder about buggy things. I often wondered what bees did during the winter. They don't diapause and become inactive, but continue to be active and fly on warm days. When the temperature drops below 55 degrees F, the workers cluster around the queen, the brood and their honey store. The outside bees crowd closely together forming an insulation blanket at least two bees deep around the rest of the colony. The bees inside the cluster eat honey and convert it to heat by vigorously vibrating their wing muscles without moving their wings. Even when the outside temperature is below freezing, the inside of the colony is kept comfortable: between 68 and 86 degrees F. They also air condition the hives in the summer by fanning their wings. They bring water droplets into the hive and fan their wings to evaporate it and keep the colony comfortable.

Information for this *Gloworm* was taken from the **Handy Bug Answer Book** and selected sites on the internet!

Happy Buggin'

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