

## Florida Bears and Beekeeping<sup>1</sup>

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The black bear is a major predator on beehives in Florida. Large-scale urban and agricultural development inexorably reduces prime bear habitat each year. This habitat also contains excellent bee forage and so bears and bees often come in contact, thus resulting in bear predation.

Black bears are located in many places in Florida, but are concentrated in certain areas. Major populations occur in southwest Florida (Collier, Hendry and Monroe counties), Central Florida (Hernando, Pasco and Citrus, Marion, Volusia and Lake counties) northeast Florida (St. Johns, Columbia and Baker counties) and in the southern panhandle (Franklin, Liberty, Gulf, and Bay counties). Both heavy and moderate populations are noted in Figure 1.

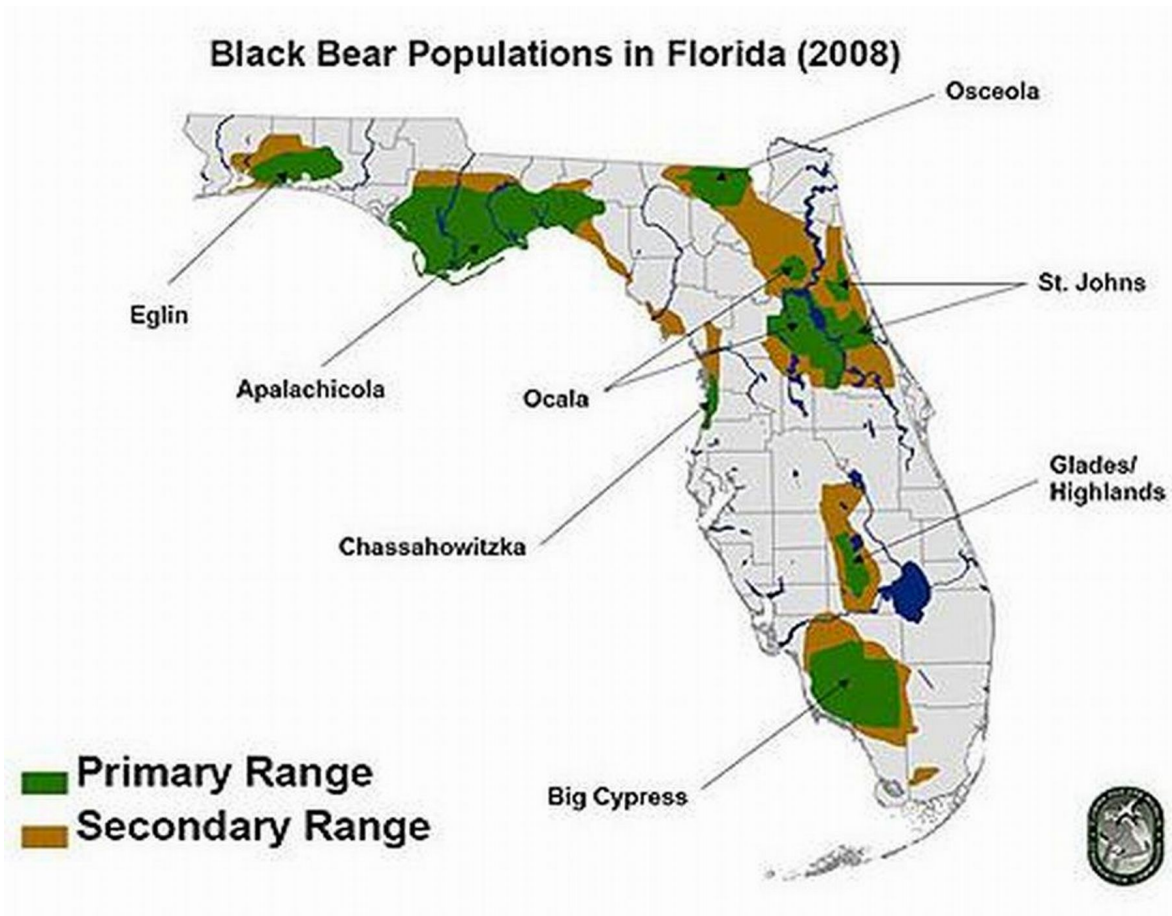
Reported bear depredations on apiaries have decreased over the years largely due to the success of using electric fences to limit bear access to apiaries. Reports of bear depredated apiaries have decreased from 10-45 per month 10 years ago to less than 1 per month during the last three years. Since 2001, most reports of bear depredation come from the northern half of the state.

The best defense against bear depredation is prevention. Colonies should be located as far as possible from known bear trails. The two best and most reliable bear deterrents against beehive depredation are platforms and electric fences. Both methods of deterrent are IPM-friendly. Platforms are unquestionably effective, but are costly to build and often present bee management difficulties.

Bear biologists at the Florida Wildlife Commission state that the use of electric fences are the primary reason for the large reduction in reports of bear depredated apiaries over the last decade. A well-maintained electric fence will keep most bears out of a bee yard if the colonies are placed inside after the fence is constructed. Once a bear has damaged colonies and gets a taste of honey and brood, even electric fences often are not much help. Fences should have two or more "hot" wires, one eight inches off the ground, the other about forty inches high, with perhaps a third in the middle. Woven wire is suggested for an inside fence and a wire mat about two feet wide should be laid around the fence base. Both fencing and mat should be connected to the ground wire of the fence controller. You should consider using an electric fence if you keep bees in a location where bears are present (Figure 1).

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**Figure 1.** Bear distribution in Florida. Credits: Florida Fish and Wildlife Commission (<http://myfwc.com/bear/>)

Indemnity payment to beekeepers for bear damage does not exist in Florida. The Florida Fish and Wildlife Conservation Commission (<http://myfwc.com/>) publishes a pamphlet entitled *Living with the Florida Black Bear* (<http://myfwc.com/bear/Brochures.htm>). Research continues to confirm the effectiveness of electric fences as preventative measures, along with the practice of aversive conditioning. Bears found in nuisance situations are darted and a tooth is pulled. After being treated in this manner, it is thought the experience will deter further visits. Studies also show that bears are opportunistic omnivores. This means they do not actively search out apiaries, but disturb them only when and if they find them. Bears, like humans, follow the course of least resistance. Thus, placing apiaries out of their path, away from established roads and watercourses, are good location strategies and are IPM friendly. Beekeepers having problems with bears should contact one of the five regional offices of the Florida Fish and Wildlife

Conservation Commission

[http://myfwc.com/ABOUT/About\\_OrgStructure.htm](http://myfwc.com/ABOUT/About_OrgStructure.htm).

An interesting dynamic between black bears and honey bees may soon develop. Africanized honey bees are now present in Florida. Africanized bees are more defensive than the European races of bees currently used in the state. Bears attempting to access colonies of Africanized bees may sustain a larger number of stings than they have experienced with European bees in the past. How this will affect bear/bee dynamics remains to be seen, but Africanized bees will be able to defend themselves against bear depredation better than European bees have in the past.

## References

**Florida black bear information:**

- <http://myfwc.com/bear/>

**Black bear/honey bee publications:**

- <http://apt.allenpress.com/aptonline/?request=get-abstract&issn=1537-6176&volume=016&issue=02&page=0234>
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