



Phone 863.465.2571  
123 MAIN DRIVE ★ VENUS, FLORIDA 33960

To: Highlands News-Sun

From: Archbold Biological Station

Date Published: December 1, 2017

Author: Archbold Biological Station

## **Fire Ants and Floods**

Fire ants can't think or speak, but even if they could they wouldn't be phoning FEMA. Floods favor fire ants. The region of South America where the imported fire ant originated is largely flat and subject to seasonal flooding. When these fire ants were (accidentally) brought to Alabama and Florida they got off the boat already adapted to their new home.

Dr. Mark Deyrup, Program Director of the Entomology Program at Archbold Biological Station states, "With the rain during and after Hurricane Irma local fire ants once again demonstrated their water resistance. As soil became soaked, fire ants emerged from their subterranean tunnels and began to build the typical mounds of loose soil in which an entire colony could take refuge. When water rose further, colonies relocated to slightly higher land, or the bases of trees and shrubs. If a building was the driest place around, fire ants didn't wait for an invitation, as many of us discovered. When a fire ant colony was completely overwhelmed by water its members may have joined together in a big ball of ants drifting along until it reached land or an object such as a floating log."

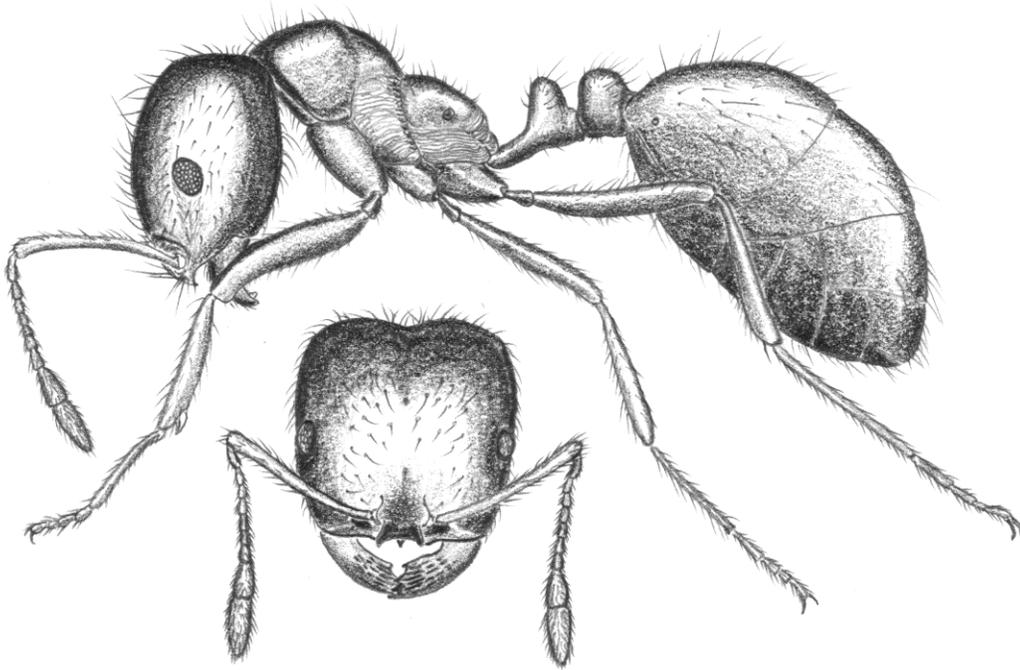
When waters recede after a flood fire ants are already around, ready to rapidly colonize areas that are relatively free of other kinds of ants that were not so resilient. Dr. Deyrup explains, "At Archbold Biological Station, where ants have been studied for over 30 years, fire ants are generally absent from naturally dry areas such as Florida scrub. They are more likely to be found in disturbed areas and around the edges of seasonal wetlands. Many natural wetlands are free of fire ants; in these wetlands researchers have found many colonies of native ants that inhabit tussocks of native grasses. These native ants might exclude or compete with fire ants,

although there is little research on this. There are mysteries about the natural history of even the commonest insects.”

In our region fire ants seem to thrive best in open areas of low grass and vegetation where the soil is often damp. “This pretty much describes our cherished lawns,” remarks Dr. Deyrup. The absence of a diverse native ant community in lawns and most roadsides may help explain the overabundance of fire ants in such places. Dr. Deyrup mentions, “A visiting rancher once puzzled Archbold scientists by claiming that he had a barbwire fence on his ranch that fire ants were unable to cross. He later explained that one side of the fence was native bunchgrass prairie, the other side had been plowed and seeded with turf grass such as Bahia. In the latter pasture fire ants had achieved more or less maximum occupancy.”

The ferocity of imported fire ants is also a kind of adaptation to flooding. When soil is wet the entire colony, including all the larval fire ants, is in a loose mound of dirt, where it is supremely vulnerable to predators. Worker ants with their powerful stings vigorously defend this colony. “The fire ant is a classic stand-your-ground animal,” explains Dr. Deyrup. “Unlike most humans, however, fire ants lack the intellectual ability to analyze the reality of an apparent threat. It is unlikely that fire ants can make a distinction between the toe of your shoe and the snout of a marauding ant-eating animal.”

**Photo 1: A drawing of the Red Imported Fire Ant, *Solenopsis invicta*. Drawing by Mark Deyrup.**



**Photo 2: A fire ant. Photo by Long Nature Photography.**

