

Report

Two New Exotic Pest Ants, *Pseudomyrmex gracilis* and *Monomorium floricola* (Hymenoptera: Formicidae) Collected in Mississippi

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Here we report collections of two new exotic pest ants, *Pseudomyrmex gracilis* (F) (Hymenoptera: Formicidae: Pseudomyrmicinae) and *Monomorium floricola* (Jerdon) (Myrmicinae), from Mississippi. We collected specimens of these two species on Sabal palm (*Sabal* sp., Arecaceae) on 20 May 2010 at an outdoor nursery specializing in palm trees in Gulfport, Harrison County, Mississippi (30°23'47"N 89°05'33"W). Both species of ants were collected on the same individual tree, which was planted directly in the soil. Several workers of *Monomorium* were observed and collected, but only one worker of the *Pseudomyrmex* was collected. No colonies of either species were discovered, but our reluctance to damage the palm by searching for colonies prevented a more thorough search. Palms at this nursery were imported from Florida, and it is therefore possible that the ants were inadvertently introduced with the plants, as both of these species are known to occur in Florida (Deyrup et al. 2000).

The Mexican twig or elongate twig ant, *P. gracilis* (Figure 1) has a widespread distribution from Argentina and Brazil to southern Texas and the Caribbean (Ward 1993, Wetterer and Wetterer 2003). This species is exotic elsewhere in the United States, only being reported from Florida, Hawaii, and Louisiana. It was first reported in Florida from Dade County in 1960 (Whitcomb et al. 1972), and since then it has spread throughout much of the state (Wetterer and Wetterer 2003). This species has been known to occur in Louisiana only since the mid 1990s, but since that time it has been collected in several of the southern parishes (Dash 2005). It was first collected in Oahu, Hawaii in 1976 (Beardsley 1979). Photographs of this species taken in Pearl River County, Mississippi during 2009 were posted on an insect identification website (Ott 2010), although specimens were not collected nor vouchered in a museum.

Workers of *P. gracilis* are large (8–10 mm), slender, bicolored orange and black, with large eyes, abundant erect setae, an elongate two-segmented waist, and a well-developed sting (Ward 1985). This species is easily distinguished from other Nearctic *Pseudomyrmex* species by its large size and bicolored orange and black appearance. This species can inflict a painful sting, but is not particularly aggressive.

Monomorium floricola, the bicolored trailing ant (Figure 2), is native to the Old World tropics. In the United States, this species is only known to occur in Florida and Hawaii. It was first reported from Florida in 1895 and is now considered to be a common species in the state (Deyrup et al. 2000). It is widespread throughout the Hawaiian Islands (Nishida 1992).

Workers are minute (1.4–1.8 mm long), bicolored black and yellow-red, with 12-segmented antennae that end in a three-segmented club, have a two-segmented waist, and a small sting. This species is easily distinguished from other *Monomorium* species in this region by its bicolored appearance. In natural conditions, workers feed on dead and living insects, tend honeydew-producing insects, and feed at extrafloral nectaries. However, this species also commonly infests households, where it feeds on various

sugary and protein-rich foods (Smith 1965). This species is a successful tramp species and an invasive threat in some areas (Harris and Berry 2010).



Figure 1. *Pseudomyrmex gracilis*, profile view of worker.



Figure 2. *Monomorium floricola*, profile view of worker.

It is unclear whether or not *P. gracilis* and *M. floricola* are established in Mississippi at this time because our collections were made on a single palm that had been imported from Florida. However, based on the increased presence of *P. gracilis* in both Florida and Louisiana and the fact that it was photographed in Pearl River County, Mississippi, it seems likely that it could already be established in Mississippi. *Pseudomyrmex gracilis* occurs much farther south latitudinally in South America than it has been found in the United States (Ward 1993), which implies that its range could potentially extend much farther north in the United States. Similarly, *M. floricola* has been gradually spreading northward in Florida since it was first reported from the state in 1895 (Deyrup et al. 2000). It has spread to many lowland tropical regions throughout the world (McGlynn 1999). However, because *M. floricola* is considered to be a subtropical to tropical species, it is unlikely to spread very far northward in Mississippi, although it could potentially survive on the coast. In 2008 we collected *Tapinoma melanocephalum* (Fabricius), an exotic ant species with a similar distribution to *M. floricola*, at a different palm nursery (MacGown and Hill 2009). On a repeat visit to the site in 2009, *T. melanocephalum* was again observed and was more abundant than during the previous year. Other exotic species with similar tropical distributions also have successfully over-wintered in south Mississippi, suggesting that *M. floricola* also could become established in the region.

Several other species of ants were collected at the site, including *Dorymyrmex bureni* (Trager), *Brachymyrmex patagonicus* Mayr, *Camponotus floridanus* (Buckley), *Odontomachus brunneus* (Patton), *Solenopsis invicta* Buren, *Aphaenogaster miamiana* Wheeler, *Pheidole moerens* Wheeler, and *Pheidole obscurithorax* Naves. *Dorymyrmex bureni* and *A. miamiana* are both native species. *Camponotus floridanus*, another native species, was previously known to occur in Mississippi only on Horn Island in Jackson County. *Odontomachus brunneus*, a possible native species, previously had not been reported from Mississippi. It is possible that both *C. floridanus* and *O. brunneus* were transported to Mississippi from Florida with the imported palms. The other species collected at the site, *B. patagonicus*, *S. invicta*, *P. moerens*, and *P. obscurithorax*, are all introduced species that have become well established in southern Mississippi.

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