

RED IMPORTED FIRE ANTS EXPAND THEIR RANGE ACROSS THE WEST INDIES

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The islands of the West Indies have long been home to fire ants (Mann 1920, Wheeler 1905, Wilson 1971), but until the last two decades, this meant only the tropical fire ant, *Solenopsis geminata* (Fabricius). A potentially more serious pest, the red imported fire ant, *Solenopsis invicta* Buren, is now expanding its range in this region. The expansion of *S. invicta*'s range outside the United States has received relatively little attention. Buren (1982) first reported it in Puerto Rico from three mounds in El Tuque, a seaside park near Ponce. It is now very common and widely distributed in Puerto Rico. We collected *S. invicta* at the following locations: Guayama (April 1992, SDP [Porter et al. 1997]), Mayaguez (October 1995, LRD), and Ponce (September 1997, LRD). Mounds were observed and disturbed but no specimens were taken from San Juan (November 1997, LRD), Luquillo Beach (November 1997, LRD), and the Caribbean National Forest (November 1997, LRD).

The red imported fire ant has been reported from several islands in the Bahamas (Fig. 1). In a recent review of Bahamian ant biogeography, Morrison (1998) found records of *S. invicta* from San Salvador (Deyrup 1994). This species has

since been discovered on New Providence and North Andros Islands (Deyrup et al. 1998). The following collections provide new records for *S. invicta* on other Bahamian islands (Fig. 1). Zach Prusak collected foraging *S. invicta* workers on Gorda Cay (= Castaway Cay, October 1997) as stray workers near a large resort construction site but he did not find nests. John Mangold collected *S. invicta* (May 2000) on Abaco Island (Marsh Harbor, Island Breeze) and Grand Bahama Island (Redwood Inn and Freeport airport).

The following are new records from other parts of the West Indies (Fig. 1). Barbara L. Thorne sent fire ants to us from the British Virgin Islands (Guana Island, October 1996) that we identified as *S. invicta*. The presence of this species on Guana Island is, apparently, a recent occurrence. Snelling (1993) spent the month of October 1992 collecting ants there and did not find *S. invicta*. Rudy G. O'Reilly, Jr. collected additional specimens containing alate males and females from four large colonies on the National Guard facility at Estate Fredensborg about 9 km west of Christiansted on the island of St. Croix, US Virgin Islands (November 1997). John Mangold collected specimens of *S. invicta* from a mound along highway 66, about 0.8 km east of highway 663, St. Croix, US Virgin Islands (November 2000).

John Mangold also collected specimens of *S. invicta* from 7 sites on the island of Providenciales, Turks & Caicos (May and June 2001).

Ron Barrow provided 4 samples of *S. invicta* from Antigua, collected at the following locations (January 2000): All Saints; Gambles Terrace, St. Johns; Paynter's Paradise, St. George; Buckley's Village. These constitute the first records from the eastern edge of the Lesser Antilles.

In June 2000, two large colonies containing alates were found in Trinidad near Caroni Swamp on the western coast of the island. Classical morphological identifications of these samples were supplemented with gas chromatographic analysis of cuticular hydrocarbons and venom alkaloids. (Vander Meer 1986; Vander Meer & Lofgren 1988). Because the western edge of Trinidad is only approximately 10 km from the Venezuela coast an invasion of northern South America by *S. invicta* might be expected. Established populations of *S. invicta* are also very likely on other islands in the Lesser Antilles. Improved quarantine efforts may slow the spread of this ant (Lockley & Collins 1990), but mated queens are known to disperse 20-32 km over the ocean (Banks et al. 1973; Wojcik

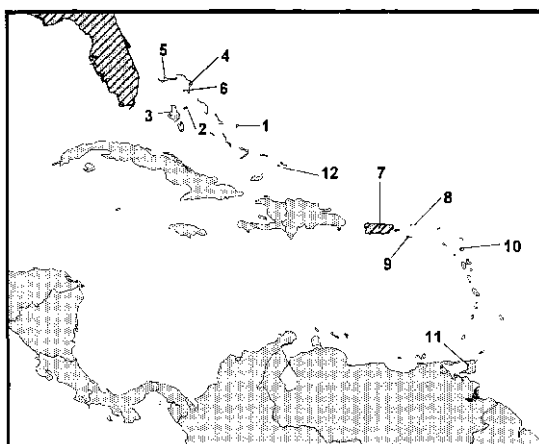


Fig. 1. Known distribution of the red imported fire ant, *Solenopsis invicta*, in the West Indies. The Bahama Islands: 1) San Salvador, 2) New Providence, 3) North Andros, 4) Abaco, 5) Grand Bahama, 6) Gorda Cay). Other Caribbean locations: 7) Puerto Rico, 8) British Virgin Islands, 9) U.S. Virgin Islands, 10) Antigua, 11) Trinidad, 12) The Turks and Caicos Islands; Providenciales Island. Puerto Rico and Florida are marked with bold hash marks because they are generally infested by *S. invicta*.

1983) so they may be able to jump between some of the islands. *Solenopsis invicta* is likely to invade Jamaica, Hispaniola, and Cuba, if indeed it is not already present on one or more of these islands.

Clearly, the red imported fire ant is spreading and becoming a threat throughout the West Indies and may require intensified local quarantine efforts. Resources committed to early detection and eradication of incipient infestations could also greatly delay ecological and economic problems caused by this highly aggressive invasive ant species (Lofgren 1986).

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SUMMARY

We present new records for *Solenopsis invicta* from the Bahama Islands (Abaco Island, Grand Bahama Island, and Gorda Cay) and the first records from the British Virgin Islands (Guana Island); the United States Virgin Islands (St. Croix, 2 sites); the Turks and Caicos Islands (Providenciales, 7 sites), Antigua (4 sites); and the island of Trinidad. These records indicate that this potentially damaging species is becoming widely distributed across the West Indies.

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