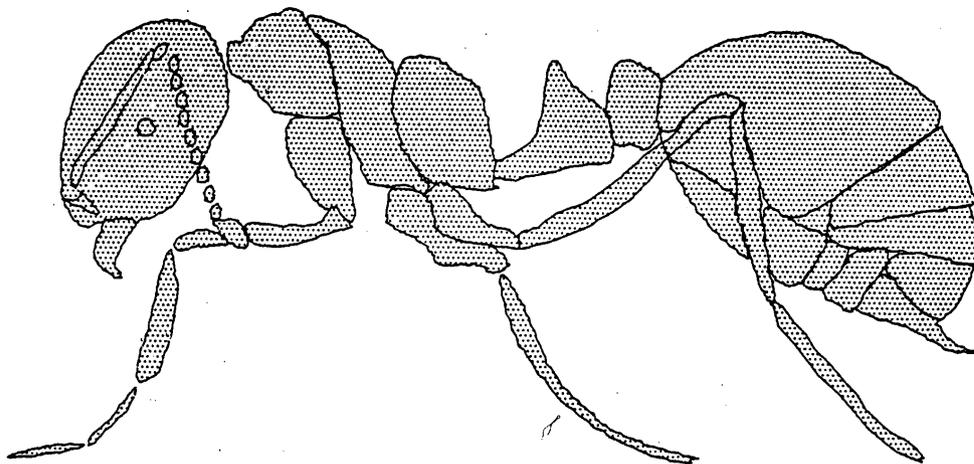


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Distribution of imported fire ants in the Florida Keys

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The Florida keys represent an unique tropical habitat in the United States and are home to a variety of endangered wildlife. Red imported fire ants have only been reported from a few locations in the Keys, mainly in highly disturbed areas such as parking lots or road sides. As part of a larger study on the effects of imported fire ants of endangered wildlife, we realized that it was necessary to determine the true distribution of the ants in the keys as well as their presence in various habitats.

Keys and habitats were selected for sampling based on several criteria. Primarily, habitats in protected wildlife or conservation areas inhabited by endangered species (sea turtle nesting sites, Key deer, Salt Marsh rabbits, Stock Island tree snail, Key Largo wood rat) were included. Secondly, habitats which were being considered for the reintroduction of endangered species, such as the Stock Island tree snail were included. Ants were sampled primarily with terrestrial baits. A 3/4-inch diameter ground meat-ball and a 1-inch honey-soaked cotton wick were placed separately on the ground on 1-inch square heavy aluminum foil. The two baits were placed 8-12 inches apart at each sampling site. Arboreal baits consisting of a meatball or honey-wick (in separate plastic cups) were placed in bushes or trees 3-7 feet of the ground. Arboreal baits were only used in potential snail habitats or in mangroves with mosquito ditches. Test-tube pitfalls containing propylene glycol were used in snail habitat. When arboreal baits or pitfalls were used, they were placed at the same relative locations as the terrestrial baits.

Over 3,000 samples from 120+ locations were collected and processed. Sampling with baits (terrestrial or arboreal) and pitfall traps demonstrate that fire ants have penetrated some undisturbed areas. Berm (sea turtle nesting sites), transition-zone (Salt Marsh rabbits), and hammocks and pine woods (Key deer, Key Largo wood rat) were found to be infested on several keys. Three sites being considered for the reintroduction of the endangered Stock Island tree snail, Stock Island Botanical Park, Little Hammaca City Park on Key West, and Nature Conservancy property on Little Torch Key were all found to harbor RIFA.

The information obtained in the Keys will be used by our cooperators in selecting habitats for the re-establishment of the endangered Stock Island tree snail in protected habitats. The presence of RIFA in some of these habitats complicates the reintroduction process and may require the judicious use of chemical treatment for RIFA control.