

Avoiding Fire Ant Stings

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Introduction

Imported fire ants (*Solenopsis invicta* and its hybrids) have been found in Virginia since 1989 and are an increasing concern as they expand their range in Virginia. Imported fire ants swarm and attack aggressively when their colony is disturbed. Pheromones released by fire ants quickly alert colony members to the threat, leading to a mass attack and many stings by the defending ants. Physical reactions to fire ant venom will vary with a person's sensitivity. Some people may require medical treatment after being stung by fire ants.

Identifying Fire Ants

Adult imported fire ants have a two-node "waist" and antennae with 10 segments, including a two-segmented club at the tip (Fig. 1). *Solenopsis invicta* is a reddish brown but its hybrids may be darker in color. The stinger visibly protrudes at the tip of the abdomen. Other ants in Virginia, such as the Allegheny mound ant and the Asian needle ant also have painful bites and stings. Contact your [local Cooperative Extension office](#) to have ants identified.



Figure 1. Fire ant worker (April Noble, Antweb.org, Bugwood.org).

Fire Ant Stings

Imported fire ants are quick to defend their colony by mass attack. Each ant firmly bites the skin with its strong jaws and stings multiple times as it pivots in a semicircle. Fire ant stings induce a brief but intense burning sensation, followed by the formation of fluid-filled lesions or blisters that become pustules about a day later (Fig. 2). These pustules contain yellowish fluid and resemble pimples that typically drain and scab over in a few days (Fig. 3). Fire ant venom contains toxins that produce the characteristic pustule formation as well as allergenic proteins that cause swelling and itching.



Figure 2. A badly stung arm (Murray S. Blum, University of Georgia, Bugwood.org).

Fire ant stings can be treated much in the same way as bee stings, with cold compresses and over-the-counter products for the associated pain and itchiness. Care should be taken to avoid scratching the stings and protect against secondary bacterial infection in the pustules.

People who are very sensitive to insect venom may experience wide-spread reactions after being stung by fire ants, including anaphylactic shock. People

who are allergic to bee stings should seek immediate medical attention if they begin to experience breathing problems or other allergic reactions after being stung by fire ants.



Figure 3. Fluid-filled pustules form at the sites of fire ant stings (Daniel Wojcik, Bugwood.org).

Avoiding Fire Ant Stings

- Be aware of any fire ant activity in the area.
- Know how to recognize fire ants and signs of fire ants.
- Wear closed toe shoes with socks in areas known to have fire ants.
- Tuck pant legs into socks. Do not leave skin exposed on lower legs.
- Use insect repellents on footwear and clothing.
- Avoid stepping on mounds.
- Leave the area as soon as fire ants are seen or if you are stung.
- If stung, seek prompt medical attention if you experience whole body reactions such as hives, shortness of breath, swelling, and other symptoms of anaphylaxis.
- If you are allergic to insect stings, carry an injectable epinephrine pen with you.

Virginia Fire Ant Quarantine

To slow the spread of imported fire ants, the Virginia Department of Agriculture and Consumer Services (VDACS) and the US Department of Agriculture have set a Federal Fire Ant Quarantine (FFAQ; Fig. 1) over much of the southeastern portion of the state. The FFAQ does not currently include all the localities in Virginia known to have imported fire ants and will likely be expanded in the future.

Imported fire ant management within the FFAQ is the responsibility of those living and working there. VDACS manages fire ant colonies only found outside the FFAQ to slow their spread into new areas. If you find fire ants **outside of the established FFAQ**, please submit a sample of the ants to your [local Cooperative Extension office](#) or contact VDACS at 804-786-3515.

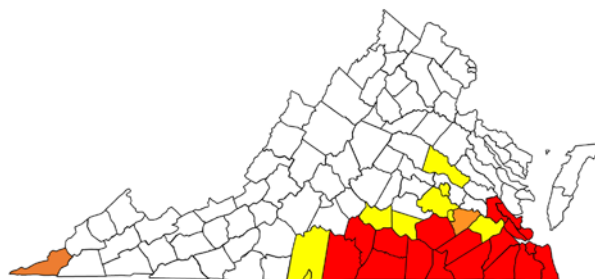


Fig. 4. Currently known distribution of imported fire ants in Virginia as of Feb 2024. Red indicates heavily infested areas and the current quarantine set by VDACS. Orange indicates widespread infestation in areas not quarantined by VDACS to date. Yellow indicates lightly infested or only small, localized infestations known to date. (Insect Identification Lab, Virginia Tech)

Revision

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