

## Student Activity: Help Detect, Report, and STOP the Little Fire Ant

Little fire ants (LFA) are a new stinging ant that can infest yards, homes, farms, and forests. They are native to South America, but were discovered in the Puna area of Hawaii Island in 1999. LFA have since spread, hidden in plants, logs, green waste, gravel, and even cars.

Interisland spread has been somewhat limited by plant treatment and inspection, although in December 2013, LFA were discovered in hapuu logs being sold at nurseries and garden shops on Oahu and Maui, and had been moved to landscaping on Lanai. Many of the hapuu sold to the public remain unaccounted for, and there are other ways that LFA may have been transported to any of the islands.

A multi-agency response has been launched to survey potential LFA locations and treat all known infestations. Eradication is possible, but we need everyone's kokua to find this pest, report it, and stop it.

Sadly, LFA are considered widespread on Hawaii Island, and we will always be at risk. Learning how to survey for LFA will give you the tools you need to help you protect your family. For more about LFA, visit [www.LFAHawaii.org](http://www.LFAHawaii.org) or [www.littlefireants.com](http://www.littlefireants.com). Mahalo!



### ***Day 1: Survey for Ants***

First, learn the impacts of LFA by watching MISC's short movie. Next, learn what you can do- view this short (3-minute) video on how to survey for LFA: <http://vimeo.com/97558997>. Surveying your property and turning in ant samples are the best ways you can help, but it is very important that students follow the instructions, and be accurate and honest about where the ants were collected. Students may be tempted to share ant samples with others who forgot to bring in samples from their own yards. This is OK, but they may NOT claim that they were collected in different places. Inaccurate or false data can harm our ability to find and eradicate LFA.

It is easy to avoid getting stung while surveying for LFA. LFA move very slowly; they do not run around when disturbed, and they do not sting unless they find themselves accidentally squeezed between clothes or watch bands and skin.

### **Materials & Setup**

- 15 (or more) clean, disposable chopsticks (or popsicle sticks). Optional: use bright orange paint or felt-tip markers to color one end of each chopstick so you can find them again
- Peanut butter (the cheaper generic kind works best; the "natural" kind doesn't work as well; if you or a member of your household has peanut allergies, use small squares of luncheon meat, with tongs to pick them up)
- Small, zip-top plastic bags (sandwich or snack size)

- 1 larger bag (large zip-top or plastic grocery bag) to keep ant samples and data sheet together
- Pencil for filling in the Survey Log sheet
- Permanent marker/sharpie to write on the bags
- Survey Log sheet

### **Survey Instructions**

Conduct your survey in the mornings or early evenings, in dry weather. Do not survey when it is raining.

1. Fill in the Survey Log (attached) with your name and contact information, and draw an easy map of your yard in the space provided (see example on Survey Log).
2. Smear a tiny amount of peanut-butter on the non-painted end of each of the chopsticks. Scrape most of the peanut butter OFF and back into the jar—ants can smell even a small amount of peanut butter.
3. Place the chopsticks around your yard or survey area in moist, shady areas, in and around plants, at the edges of your property, and near trash cans and mulch or green waste piles. Try to place the sticks about 15 feet apart.
4. On your Survey Log, number each site where you place your chopsticks, (1-15, or however many chopsticks you use).
5. Wait 1 hour
6. Open a zip-top bag and carefully pick up and place any chopstick with ants into its own zip-top bag. Seal it, then use the permanent marker to number the bag so it corresponds to the number on the map. Note: don't open the bag again after you've sealed it. Use a new bag for each stick, so there is no chance of ants escaping from a previously sealed bag.
7. Repeat for other chopsticks with ants.
8. Place all the bags in the freezer overnight to kill the ants.
9. Bring the frozen samples for ant identification (bring to class or next meeting; or, if unable to attend ID lab, samples and data sheets may be mailed or delivered to Hawai'i Department of Agriculture, 1428 S. King St. Honolulu, Hawai'i 96814.

### ***Day 2: Little Fire Ant Identification Lab***

On the day of the ID lab, try to keep the bags with samples frozen or refrigerated until the lab. Avoid carrying the bags with samples around too much, as the ants may get crushed or too coated with peanut butter to be able to identify them.

### **Materials & Setup**

- Bags of frozen ant specimens
- Completed Survey Log sheet
- Hand lens of at least 10x or dissecting microscopes (one for each lab group or student)
- Student page "*Quick Sort*"
- Rulers with millimeter markings
- Computer with student data spreadsheet.

### **ID Lab Instructions**

1. Divide students into lab groups of two to four students each. Or allow students to work on their own if you have enough magnifying lenses or dissecting microscopes.
2. Keep each specimen with the appropriate bag and Survey Log.
3. Work through the sample bags one at a time using the Quick Sort sheet. Bags of ant samples that may be LFA (or that are unclear) should be brought to the teacher's attention.
4. Enter all highlighted fields into the Excel spreadsheet.
5. Repack all suspect samples with Survey Logs for transport to HDOA. A biologist will identify the ants and notify you if they are LFA. If you suspect LFA, do NOT disturb or try to control the ants on your own, as this may spread the ants further. If they are confirmed to be LFA, we will help you.

**Didn't find LFA?** Don't be disappointed! The information you have gathered is very important. You have contributed information that will help guide eradication efforts. We encourage you to re-survey at least once a year, and always survey newly bought plants or materials. To report LFA or other species of concern, call the **Pest Hotline at 643-PEST**, or the **Oahu Invasive Species Committee at 266-7994**.

## Ant Survey Log Sheet

Please complete this form and bring with your ant samples for ID.

Your Name	Date of Survey
Address or Location of Survey	Start Time of Survey
Guardian or Parent Contact Name	Contact Phone (if LFA found)

In the space below, draw an easy diagram of your yard in the space provided. Number the approximate locations of each chopstick.

Example:

