

Air Potato Beetle (APB), *Lilioceris cheni*, Release Record

Releaser's Information

Date of release:

Name of person releasing:

Organization:

Phone:

Email:

Release Information

Location

County:

City/Town:

Address or Park/Preserve Name (please include for all residential areas):

Property Owner/Land Manager:

Land Type (residential, park, conservation area, etc):

Habitat Type (pinewoods, hardwoods, swamp, etc):

GPS Coordinates (use Map Datum WGS 84; decimal degrees: hddd.ddddd) example: 29.03444, -81.62561

*** Not necessary for residential requests**

Latitude:

Longitude:

Size/Density at Time of this release

Approximate total size of the air potato vine infestation at the time of this release:

Percent of the total area (above) covered by air potato vines (0-100%) at the time of this release:

Release Numbers/Life stage

Adult beetles: Larvae:

Florida colony origin of beetles/larvae released: Gainesville__ Ft. Pierce__ Ft. Lauderdale__

Country origin: China__ Nepal__

Please send data sheets to:

Christopher Kerr
Biological Scientist IV
FDACS Division of Plant Industry
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1. When did you first notice air potato on your property?

- less than 1 year ago
- 1 to 5 years ago
- 6-10 years ago
- more than 10 years ago
- I don't know

2. What effect is air potato having on your property? (check all that apply)

- Grows over and shades out desirable vegetation
- Unsightly when it dies back in the fall
- Decreases property value
- Other _____

3. Air potato is the most important weed problem on your property (Check one)

- Agree
- Disagree

4. Before release of beetles, what methods have you used to control air potato? (check all that apply)

- Pulling vines
- Collecting and disposing air potatoes
- Digging out subterranean tubers
- Herbicide application
- None
- Other _____ (please indicate)

5. Where did you hear about the air potato beetle?

- Newspaper report
- TV report
- Extension service
- Internet search
- Neighbor
- Other _____ (please indicate)

6. Have you seen air potato beetles on your property?

- Yes
- No

7. ☑Are there other invasive plants that cause problems on your property?

- Yes
- No

If you answered yes, please indicate the plant(s) _____

Where do my beetles go in the winter?

Christopher Kerr¹ and Carey Minter²

1: Division of Plant Industry, Florida Department of Agriculture and Consumer Services, Gainesville FL

2: University of Florida, Institute of Food and Agricultural Sciences, Indian River Research and Education Center, Fort Pierce, FL

A biological control program to control the air potato vine has been ongoing for several years now, and a significant number of the beetles have been released; over 600,000 in fact! Year after year, the air potato beetles have shown to be able to successfully overwinter; they emerge the following year continuing their control of this noxious weed. However, the concerns we most often hear are that “No beetles are showing up and the vine is growing like crazy”. On select sites, this may be true; but it is highly unlikely to occur across a region. Through our observations we have found that occasionally beetles will not return to a given site until late in the season, particularly on sites where they occurred early during the previous season and severely defoliated the air potato vines. The reasoning for this is simple, the beetles need the vine’s foliage to survive, once they have fed extensively on a site the adult beetles will migrate to a new area. If they are present towards the end of the season, or roughly late September, then there is a good chance they will be overwintering on that site.

How do you know if you have beetles on a site? This year it has been even more difficult than usual to identify incipient beetle populations. The reasons are two-fold, first the extended winter has caused the vines to sprout later than usual; most regions saw vines sprouting 2-3 weeks later than previously tracked years. Based on experience we have found that the beetles will not emerge from overwintering until roughly 4 weeks after the plant has begun to sprout; this therefore likely pushed natural air potato beetle emergence back to the beginning week(s) of June. When we couple this fact with the greater than normal rainfall during May we now have a situation where there are low populations of beetles later in the season which must be identified in an air potato vine infestation that has grown more rapidly. Needless to say, it can be hard to see small populations. The good news is with a normal generation time of about 1 month, we should expect larger, more apparent populations by mid-July. If beetles are still not seen at this time, then you may consider requesting additional beetles for release.



Figure 1. Air Potato Beetle Feeding Damage

Identifying an infestation is best accomplished by searching for signs of air potato beetle damage, instead of searching for the beetles. Once populations are large enough the beetles will be more readily noticed. Feeding damage may appear as small holes in the foliage, paper-thin leaves, or completely skeletonized leaves where only leaf veins remain (Figure 1). However, when the populations are particularly low, the best sure-fire way to identify potential air potato beetle presence is by looking at the youngest leaves. If egg-laying females are present you will start to see that the youngest leaves will be cupping downward. This occurs because females nip at the epidermal layers of the leaves to cause this downward curling, in order to create an ideal, protected environment to lay their eggs. Figure 2 shows some

cupped leaves, and what we found inside. Don't be surprised if you don't see any eggs in those cupped leaves though, they'll start creating these "egg-laying" sites even before they start laying eggs.

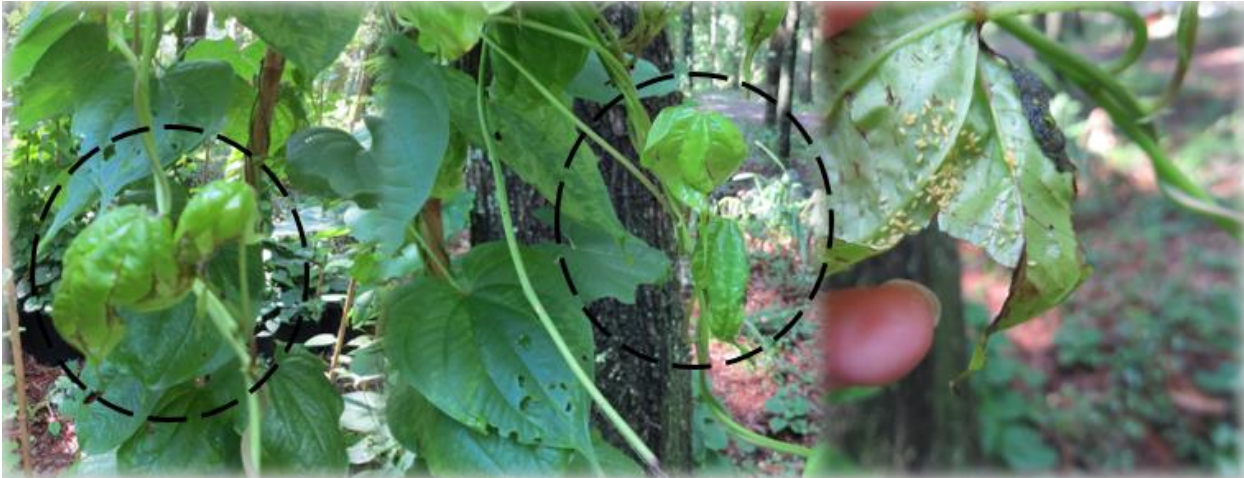


Figure 2. Cupped Leaves and Eggs (Air Potato Beetle)

If you find any signs of beetle presence, there is absolutely no benefit to requesting additional beetles. With our long waiting lists, the populations on your site will grow and expand long before we can get a small (25-50) shipment of beetles out to you.