# Obstacles to Community Participation in Reporting Pest-Related Tree Damage

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# Outline

- Problem
- Goal and Objectives
- Background Research
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- Conclusion

# Problem

- Montgomery County, MD is bracing for several incoming invasive tree pest species and diseases
- In the past, the Parks Department has been unable to mitigate the effects of invasive species, due to lack of reporting of infestations
- The Department wants to figure out why people are not reporting infestations and how they can change this behavior

# Goal

Help the Parks Department achieve increased reporting by using expert interviews and surveys to:

- gauge why people are not reporting pests
- determine ways to motivate reporting in the future

# Objectives

- Determine why so few people report infestations
- Determine the most effective reporting method for Montgomery County Parks to implement
- Help implement an effective reporting method that can be easily accessed and used by park visitors

# Background Research

| | |
|---|---|
| Julia: | Effects of Asian Longhorned Beetles on ecosystems |
| Nitin: | Effects of Thousand Cankers Disease on ecosystems |
| Megan: | Citizen science's role in reporting and managing invasive species |
| Salsabil: | Effects of educating the public and increasing awareness |
| Evan: | Effectiveness of social media in community outreach and action |
| Sylvanus: | Best communication practices to engage the public in environmental issues |

# Research Approach: Expert Interviews

Expert interviews gathered information about invasive species and public reporting trends:

- Maryland Department of Natural Resources
- Massachusetts Department of Agricultural Resources
- Montgomery County Parks
- Master Gardeners
- University of MD Extension Service

# Interview Takeaways

**Key Informant Interviews for Obstacles to Community Participation in Reporting Pest Related Tree Damage Project**

| No. | Date | Interviewer/person responsible to write up the interview | Organization & location of the respondent | Name(s) of respondents and Designation |
|---|---|---|---|---|
| 1. | 3/26/18 | Julia Bell | Department of Natural Resources | Jonathan McKnight, Coordinator for Invasive Species Responses |
| 2. | 3/29/18 | Evan Courtney | Mass. Dept of Agricultural Resources | Jennifer Orth |
| 2. | | Salsabil Chebli | Montgomery County Parks | Marilyn Sklar |
| 7. | 2/28/18 | Megan Clampitt | Master Gardeners UMD Extension | Steve Dubik |

# Research Approach: Survey

A Google survey sent to all the Master Gardeners in the vicinity of Montgomery County Parks was:

- more accommodating of busy schedules
- quicker
- able to reach more people
- open for two weeks

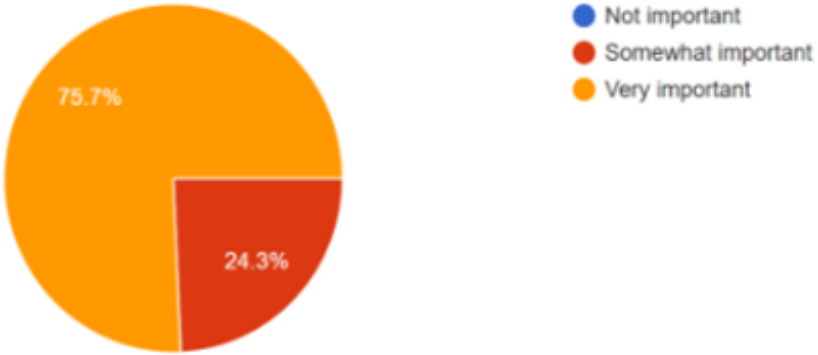
The survey received 80 responses

# Survey Analysis and Results: Public Engagement

100% of respondents believe that increasing public engagement was **at least** “Somewhat important”

How important do you think it would be if we could increase the amount of public engagement around the issue of tree pest problems?

70 responses



# Survey Analysis and Results: Barriers to Reporting

What do you see as the greatest barriers for the general public for reporting their observations of tree pest problems?

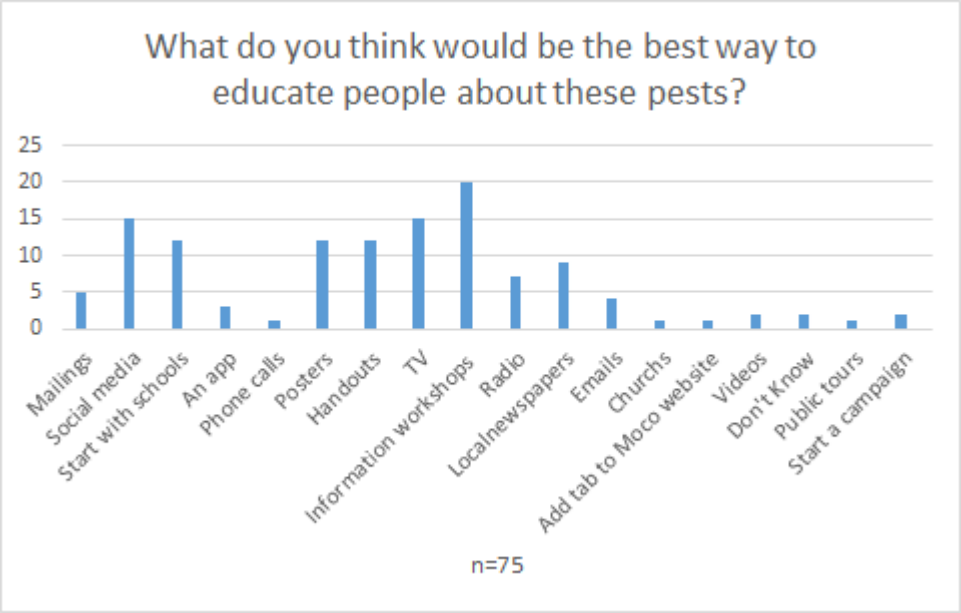
Three main barriers to reporting:

- lack of knowledge
- not knowing how or where to report
- apathy

# Survey Analysis and Results: Educating the Public

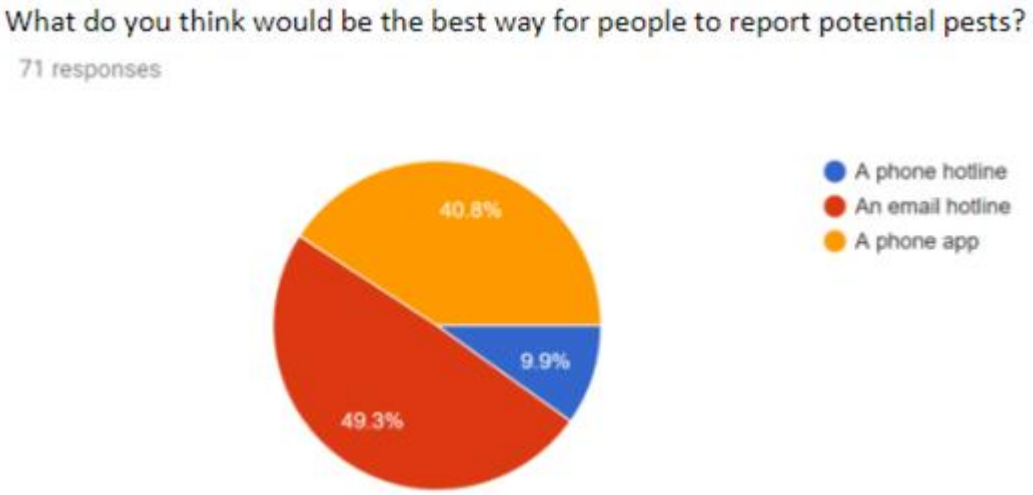
Most effective:

- informational workshops
- television ads
- social media announcements



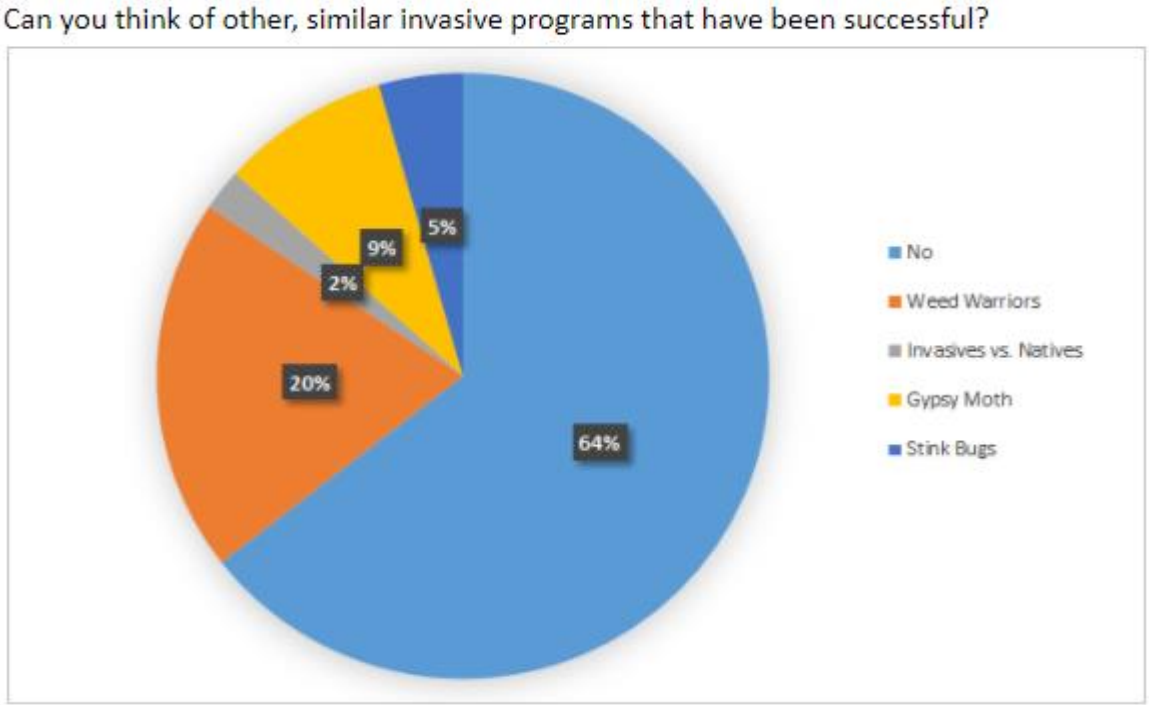
# Survey Analysis and Results: Reporting Methods

- Email hotlines were considered the most effective reporting method (49.3%)
- Phone applications were also popular (40.8%)



# Survey Analysis and Results: Successful Programs

- Over 64% of respondents couldn't think of a successful invasive species program
- 20% of respondents view Weed Warriors as a successful program



# Survey Analysis and Results: Keys to Park's Success

- Increase public engagement
- Make more attempts to educate the public
- Use email hotline
- Implement educational workshops on invasive species for the public (as well as for Master Gardeners and Weed Warriors)

# Public Education

Most effective: informational workshops, social media, and TV

Also, informational pamphlets, postcards and notices

# Best Reporting Methods

Master Gardeners overwhelmingly believe the best way to report infestations isthrough phone applications and email hotlines; they:

- allow for pictures
- don’t need to be constantly manned

Montgomery County Parks currently has an email hotline, but it is:

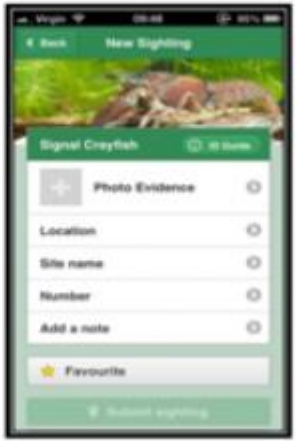
- hard to find on the website
- not exclusively listed for pests

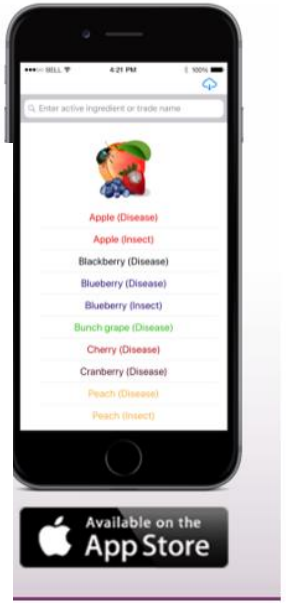
It should be made more visible with its own tab on the website

# Recommendations

Create phone mapping application that:

- includes photos and exact location
- makes it very easy to report





# Recommendations

Educate Master Gardeners and Weed Warriors

- Weed Warriors could add Thousands Cankers Disease and the Asian Longhorned Beetles to their existing training program

- Trained Weed Warriors would be able to identify and report signs of incoming invasive species

# Recommendations

## Change Hotline Location on Website

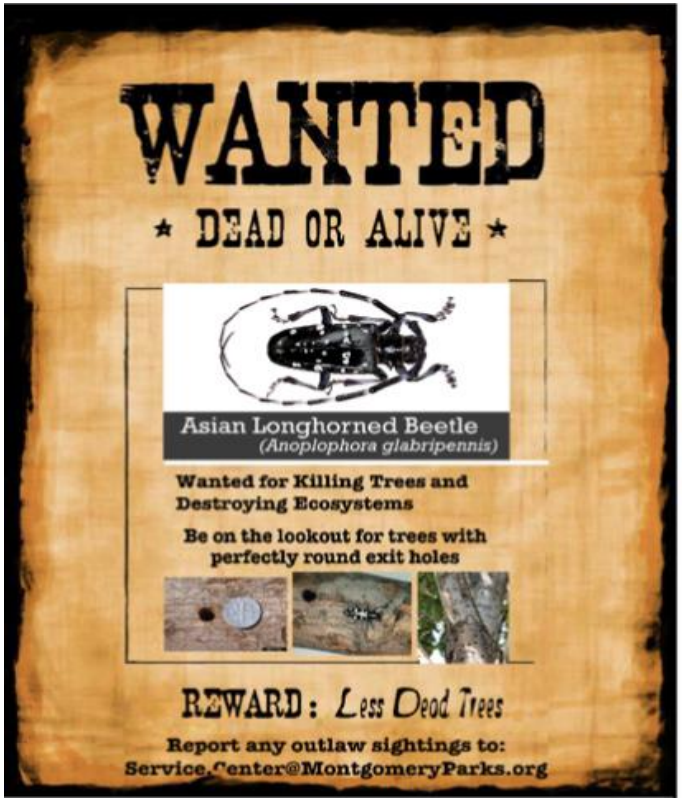
- currently under the “Permits, Rentals & Requests” tab
- difficult to find for people who aren’t regular users
- create a “Reporting” tab on the homepage as a quick link to reporting

# Recommendations

Establish Community Information Workshops

- to educate the community on pests and why it’s important to report
- to get community feedback about things like reporting pests
- to find better ways for Parks to share information with the community besides meetings

WANTED
DEAD OR ALIVE
Thousand Cankers Disease
(Pityophthorus juglandis)
Wanted for killing trees by blocking the flow of water and nutrients through its internal tissue
Be on the lookout for deterioration of bark in oval shapes all over trees
Last spotted in Colorado, but suspected to be moving east
REWARD: Less Dead Trees
Report any outlaw sightings to:
Service.Center@MontgomeryParks.org


WANTED
DEAD OR ALIVE
Asian Longhorned Beetle
(Anoplophora glabripennis)
Wanted for Killing Trees and Destroying Ecosystems
Be on the lookout for trees with perfectly round exit holes
REWARD: Less Dead Trees
Report any outlaw sightings to:
Service.Center@MontgomeryParks.org

# Limitations

Difficulty effectively reaching people

Short Timeline—one semester:

- limited the amount of work
- Limited ability for a community survey

# Future Research

Surveying the public

- learn why people don’t report infestations
- gauge interest in community workshops

Effective eradication methods

- research actions the public can take to lessen the effects of an invasive species
- include these actions on posters and handouts

# Conclusion

- People often fail to report because of apathy, ignorance, and not knowing how to report
- Use the survey results to determine how to best educate the public
- Use the recommendations to educate the public about invasive species and make them more likely to report infestations

# Questions?

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