

SEEKER

Learn about invasive species • Help researchers • Share your contributions

The Problem

Invasive species are a major economic and ecological threat, but not many people know what to do when they see an unknown species.

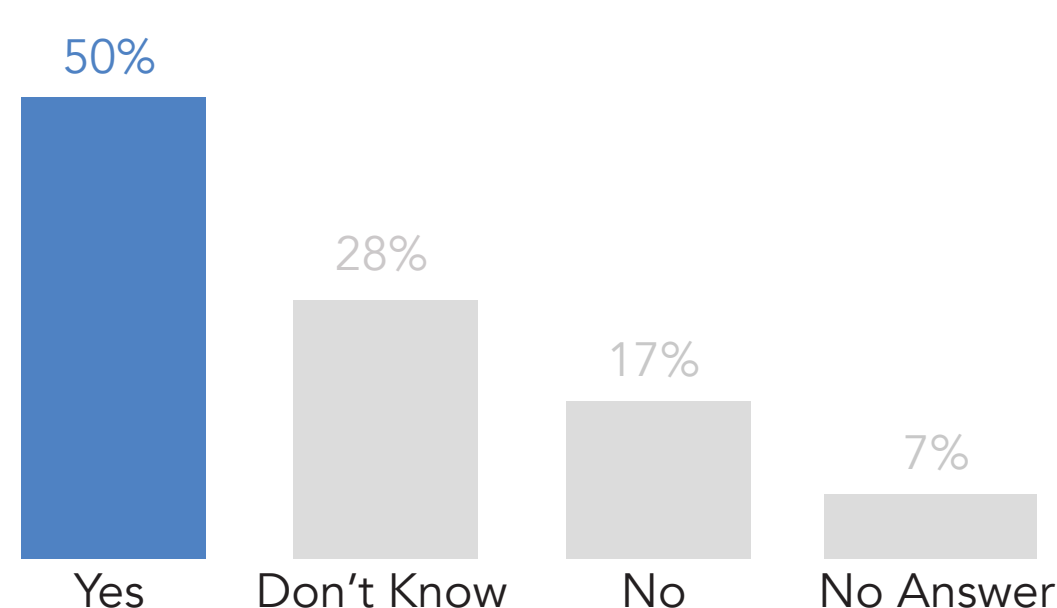
My research started with a literature review and a survey of members of the YorkU community to discover what they know about invasive species.

The ethics approved survey was provided to members of multiple York University faculties in an online format. I analyzed the data trends about respondents' knowledge and perception of invasive species.

Survey Results

Most respondents could not give a clear definition of invasive species. While 79% have heard of the term, only 50% of respondents said they had actually seen an invasive species in their neighbourhood.

Graph 1 - Have you ever seen an invasive species in your neighborhood?



Respondents could not agree on a specific time to learn about invasive species, but leaned towards elementary to high school.

Graph 2 - When do you think invasive species should be learned about?

Earlier than Elementary	1
Elementary School	8
Junior School	3
Highschool	8
Immediately	6
When they're a problem	6
When you're interested	2

Acknowledgements

Course Director: Adam Antoszeck-Rallo
 Project Advisor: Dawn Bazely
 Images via Creative Commons from Wikipedia
 Geographic Locations from Google Maps

My Solution

A Citizen Science Seeker app designed to bridge the knowledge gap, and create an interactive flow of knowledge between citizens, researchers, and government.

Seeker App informs citizens about the issues surrounding invasive species. It helps researchers by crowd-sourcing new observations and data collection. New perspectives and trends emerge to help the government develop evidence-based policies for dealing with invasive species.

App Development

The basic guiding design principles were to create an easily usable and informative tool to help the general public engage in Citizen Science. Seeker app was designed to be a seamless integration of learning, discovery, and engagement through reporting.

It went through multiple iterations and user testing sessions, to find the optimal way of displaying information on such a niche subject.

I had to keep in mind that most users would not be constantly thinking about invasive species, so the points system was embedded to gamify and reward users for helping with research.

Next Steps

The Seeker app requires back-end coding and support. During Reading Week 2016, we pitched the Seeker app at the York University Libraries Hackfest. A team of 8 computer science students developed a prototype Open Access web-based app to catch first-sightings before new species are able to establish themselves at the invasive level.

User Interface



Fig 1 & 2 - Home and Menu Screen

Provides latest news, sightings, and reports. The home screen is easy to navigate and offers the user a variety of ways to discover and learn.

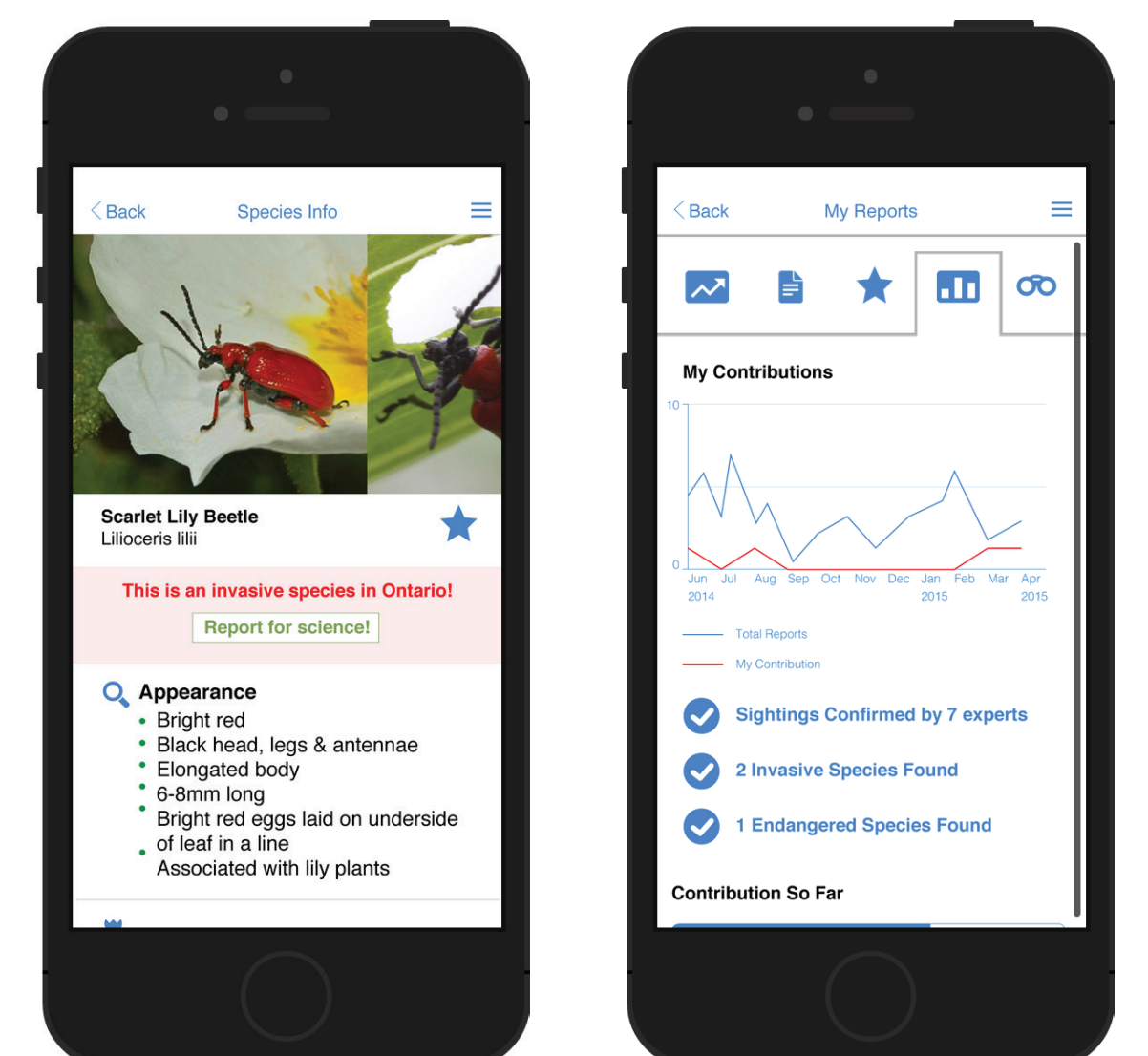


Fig 3 & 4 - Species and Reports Screen

Users can take a photo to help identify species and make reports. They can track their reports and see their contributions overall.

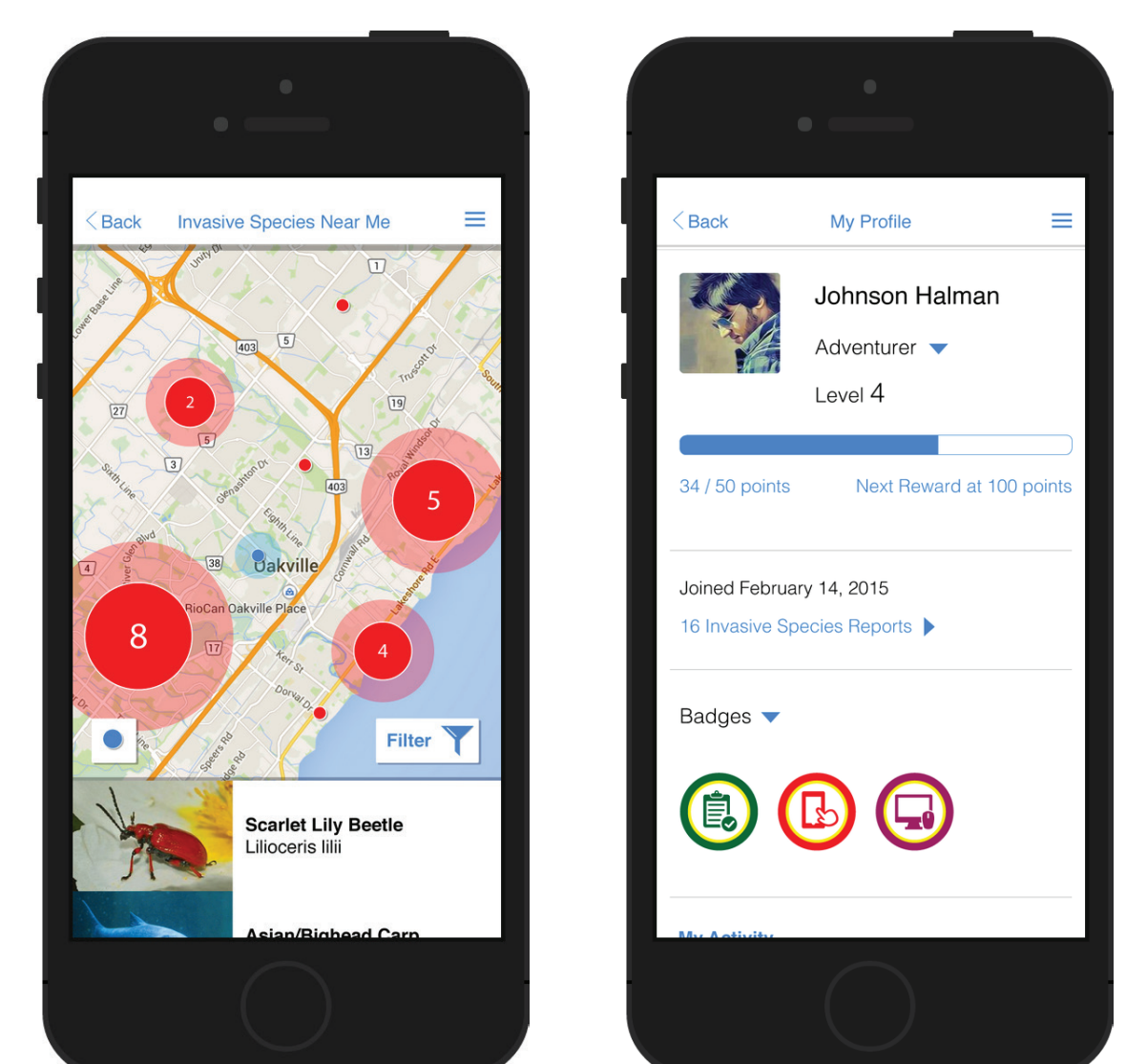


Fig 5 & 6 - Map View and Profile Screen

Shows geographical plot of reports. Points, titles and badges are tracked, encouraging users to participate for rewards on top of good citizen science.

See my prototype at <http://marvl.in/7a77ce> or

