

Early Detection Rapid Response Database

Invasive species identification and
tracking



Early Detection Rapid Response Database

- Background-
- Conceptual Design-
- Sample Applications-
- Discussion-
 1. Field needs
 2. Data mgmt needs
 3. Required fields



Background-

1. Management data from Jason and Jessie
2. Discussions of needs from SDMMP partners
 - DFW Plant/Pesticides Database
 - USGS Invasive Species (aquatic species)
 - USGS/SDMMP Invasive Species Strategic Plan
 - Feral Pig Program
3. Investigation of existing resources and solutions
 - iNaturalist
 - CalFlora
 - Cal-IPC

Conceptual Design-

Early **Detection** Rapid **Response**: Need separate tools:

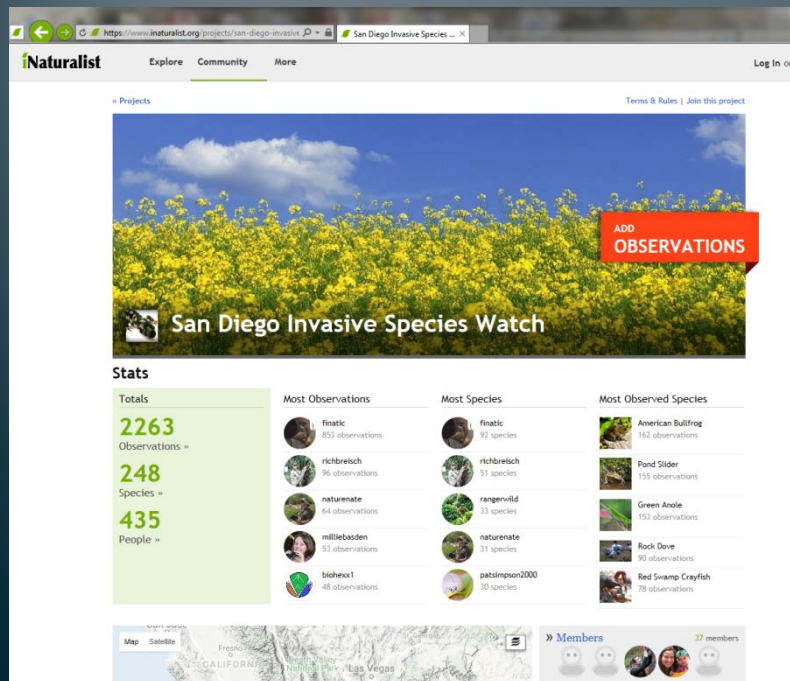
1. Simple observation
 - Survey123 for ArcGIS
 - CalFlora Observer
 - iNaturalist
2. Population tracking/monitoring
 - Collector for ArcGIS
3. Treatment Tracking
 - Web App for ArcGIS
4. Data Storage-SQL/ArcSDE based GeoDatabase
 - Data reduction and reporting
 - Security of sensitive data

Conceptual Design-

Early **Detection** Rapid **Response**: Need separate tools:

1. Simple observation

- Survey123 for ArcGIS
- CalFlora Observer
- iNaturalist



EDRR All Species

Observer
Chris Brown

Start Date/Time
Tuesday, July 17, 2018 9:16 AM

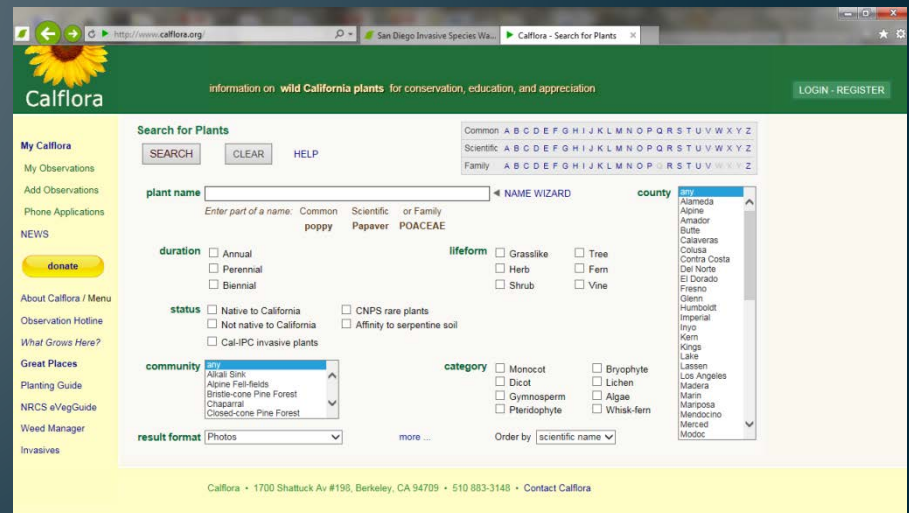
Site Location/Coordinate
32°59'N 117°11'W

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End Date/Time
Date Time

► New Species Record

Load time on Windows 1.6 seconds ☒ Validate Input



Sample applications

- Simple observation collection- Survey123
- Treatment and population tracking- Survey123 (Collector?)
- Data Managemtn-
 - ArcSDE- Arc Desktop tied to geodatabase in SQL Server
 - MS Access- Queries from geodatabase in SQL Server



EDRR All Species

Observer

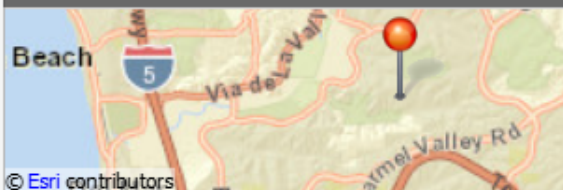
Chris Brown

Start Date/Time

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Site Location/Coordinate

32°59'N 117°11'W



End Date/Time

Date

► New Species Record

Load time on Windows 1.6 seconds

EDRR All Species

Date Time

▼ New Species Record

Taxa Type

Animal

Animal Common Name

Coqui

Observation Type

☐ Animal Visual

☒ Animal Call

☐ Track

☐ Sign-Tracks

☐ Sign-Scat

Pop size/number individuals

18

Site

Treatment History

Current Treatment

Load time on Windows 1.6 seconds

EDRR All Species

Treatment History

2016; 2017

Current Treatment

Nighttime manual removal survey

▼ New Treatment/Removal Action

Treatment Year

2018

Method

Nighttime VES

Notes

Observer

Carlton Rochester



◀ 2 of 2



1 of 1



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Discussion-

1. Field needs
2. Data mgmt needs
3. Required fields



Invasive Animal Collection Methods

Key concepts and FAQ's



Study/Sampling Design-

1. Immediate and adjacent land management
 - Managed for conservation
 - Public access
 - Potential source populations
2. Prioritization and species interactions
 - Invasive Species Strategy
 - Other competitive or complimentary invasive species
3. Methods
 - Ethics considerations-accomplishing goals while minimizing pain/take
4. Coordination
 - Other adjacent/nearby land managers
 - DFW Invasive Species program

Immediate and adjacent land management

1. Managed for conservation
2. Public access
3. Potential source populations



Prioritization and species interactions

1. Invasive Species Strategy
2. Other competitive or complimentary invasive species



Methods

1. Ethics considerations-accomplishing goals while minimizing pain/take
- <https://www.avma.org/KB/Policies/Documents/euthanasia.pdf>
 - <https://www.wildlife.ca.gov/Conservation/Invasives>



Coordination-

- Other adjacent/nearby land managers
- DFW Invasive Species program



The screenshot shows the California Department of Fish and Wildlife website. The header includes the CA.GOV logo, the department's name, a search bar, and a login link. The main navigation bar lists: Home, Fishing, Hunting, Licenses & Permits, Conservation, Learning, and Explore. The breadcrumb trail is Home > Conservation > Invasives. The page title is "Invasive Species Program". The main content area starts with the question "What does the Invasive Species Program do?" followed by a paragraph explaining the mission: to reduce the negative effects of non-native invasive species on California's wildlands and waterways. It mentions efforts to prevent introductions, detect and respond to them, and address established species. The text notes that projects address problems with introduced animals and plants, both terrestrial and aquatic, and that more fundamentally, they try to identify and address the ways species are introduced, typically inadvertently, by human activities. It states that preventing introductions is the most effective and cost-efficient way to manage invasive species and that the department works in coordination with other government agencies and non-governmental organizations. Below this is a link: "What makes a species 'invasive,' how they got here, and why they are a problem." The section "What's new in the Program?" features a link: "Youth Art Contest Deadline Extended!". On the right side, there is a grid of four images showing various invasive species: a mussel, a purple plant, a frog, and a snail. Below the images is the contact information for the CDFW Invasive Species Program: 1416 Ninth Street, 12th Floor, Sacramento CA 95814, and the email invasives@wildlife.ca.gov. At the bottom of the right sidebar, there is a section titled "Invasive Species Program" with three links: "What are invasive species?", "Species profiles", and "Nutria discovery in California".

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CA.GOV

CALIFORNIA DEPARTMENT OF FISH & WILDLIFE

California Department of Fish and Wildlife

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Home Fishing Hunting Licenses & Permits Conservation Learning Explore

Home > Conservation > Invasives

Invasive Species Program

What does the Invasive Species Program do?

The mission of the Invasive Species Program is to reduce the negative effects of non-native invasive species on the wildlands and waterways of California. We are involved in efforts to prevent the introduction of these species into the state, detect and respond to introductions when they occur, and prevent the spread of invasive species that have become established. Our projects address problems with introduced animals and plants, both terrestrial and aquatic. More fundamentally, we try to identify and address the ways by which the species are introduced, typically inadvertently, by human activities. Studies show that preventing introductions is the most effective and cost-efficient way to manage invasive species. We conduct our work in coordination with other government agencies and non-governmental organizations.

[What makes a species "invasive," how they got here, and why they are a problem.](#)

What's new in the Program?

Youth Art Contest Deadline Extended!

CDFW Invasive Species Program
1416 Ninth Street, 12th Floor
Sacramento CA 95814
invasives@wildlife.ca.gov

Invasive Species Program

- What are invasive species?
- Species profiles
- Nutria discovery in California

Contact: cwbrown@usgs.gov (619)225-6433

