*i*MapInvasives Network
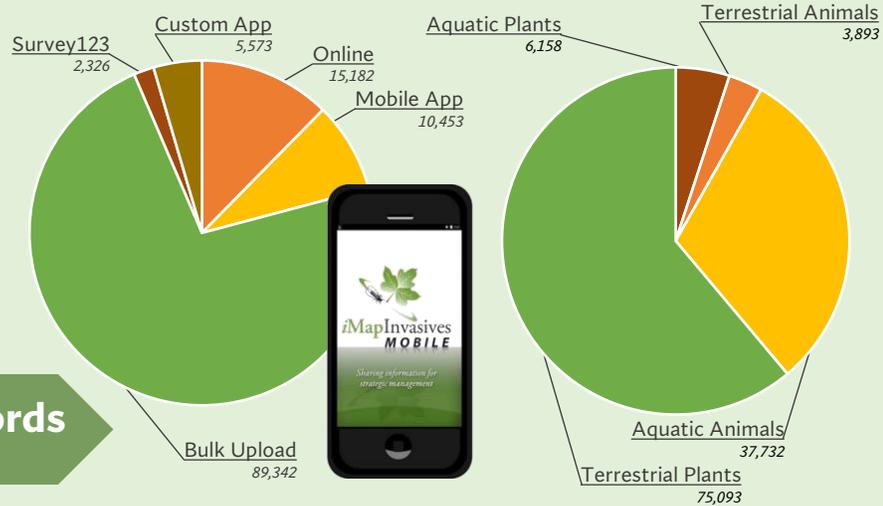# 2021 Annual Report

iMapInvasives is an online invasive species database and mapping system powered by the international non-profit, NatureServe. Natural resource professionals & community scientists use iMapInvasives in their work to protect natural resources from the negative impacts of invasive species in North America.

iMapInvasives
Sharing information for strategic management

2021 Data Snapshot

122,876 *Presence records*

9,515 *Not-detected records*

1,792 *Treatment records*

3,961 *New users*

Breakdown of 2021 Presence Records
by data collection tool, taxonomy, and habitat

Survey123 — 2,326
Custom App — 5,573
Online — 15,182
Mobile App — 10,453
Bulk Upload — 89,342

Aquatic Plants — 6,158
Terrestrial Animals — 3,893
Aquatic Animals — 37,732
Terrestrial Plants — 75,093

iMapInvasives MOBILE — Sharing information for strategic management

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Updates From 2021

iNaturalist Data Exchange

Invasive species records submitted to iNaturalist in the past five years are now viewable within iMapInvasives.
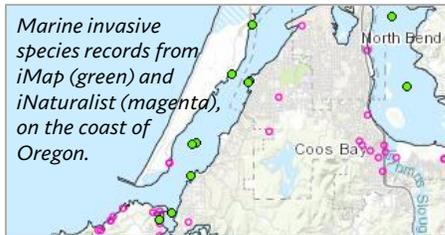
Marine invasive species records from iMap (green) and iNaturalist (magenta), on the coast of Oregon.

Filter Records

General | ○ Presence | Treatment | Not Detected

○ Confirmation Method: Has Photo: ☑ Yes ☐ No
× Photo ID

Species Verified R...
Select on

○ Follow-U...
× Mana...

Evaluation
Select on

### New Options for Filtering Data
Users can now filter on parameters specific to data type - e.g. the reason a species was not-detected, or the date that treatment started.

Publications That Used iMapInvasives Data

Jewitt et al. (2021) **Targeted Species Projects for Volunteers to Increase Early Detection Capacity: The Water Chestnut Mapping Challenge,** *Natural Areas Journal* doi.org/10.3375/043.041.0306

Johnson et al. (2021) **Public Reporting and Perception of Invasive Pheretimoid "Jumping Worms" in the Northeastern United States**, *Northeastern Naturalist* doi.org/10.1656/045.028.0311
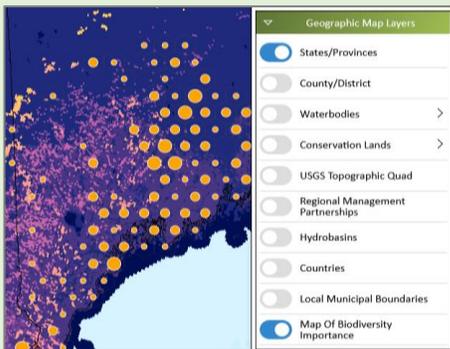

Confirmed records of Multiflora Rose overlaid with NatureServe's Map of Biodiversity Importance in Maine.

Geographic Map Layers
- States/Provinces
- County/District
- Waterbodies
- Conservation Lands
- USGS Topographic Quad
- Regional Management Partnerships
- Hydrobasins
- Countries
- Local Municipal Boundaries
- Map of Biodiversity Importance

New Geographic Layers

✓ Local Municipalities
✓ Map of Biodiversity Importance (MOBI)
✓ Improved Waterbodies Layer

Users can view geographic layers in the map interface alongside invasive species data, generate exports and summary reports for selected boundary areas, and create custom distribution maps using these layers.
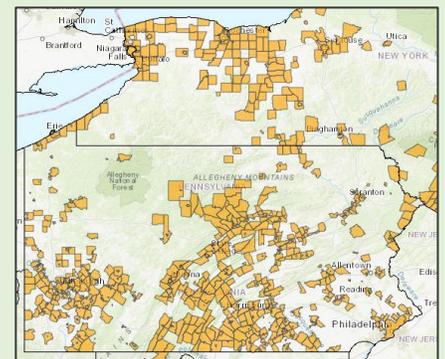
Tree-of-heaven by municipality, PA and NY (2021)

Learn more and create an account at
imapinvasives.org

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Highlights From Participating States & Provinces

Saskatchewan

The SKCDC utilizes iMapInvasives to provide all citizens of Saskatchewan a means to document invasive species in the Province. iMapInvasives is being used by partner organizations on several invasive species projects including Flowering Rush mapping, Aquatic Invasive Mussel Monitoring (AIMM) for zebra and quagga mussels, and documentation of Lily Leaf Beetles for potential impacts to native Western Red Lily populations.

Records of Flowering Rush on the South Saskatchewan River

Oregon

Oregon Biodiversity Information Center

With many partner agencies having their own data collection protocols, the majority of Oregon's iMap data comes in via bulk upload. Many thousands of records for were uploaded to iMapInvasives in 2021 from local, state, and federal agencies as well as community scientists in Oregon. These essential contributions tell us where invasives are and alert managers to new locations of priority species.

In summer 2021, the new iMap Survey123 form was used by Pure Water Partners, a coalition surveying the area of the Beachie Creek Fire and other recently burned areas in the North Santiam Watershed for early detection/rapid response species. Managers will use this information to treat newly resprouted or introduced invasives as part of post-fire recovery.

Record 1159151: Slender false brome resprouting after the Beachie Creek Fire, reported via the iMap Survey123 form.

Arizona

AZ Heritage Data Management System, AZ Game & Fish Department

Many key datasets were bulk-uploaded to iMapInvasives, including buffelgrass records from the Arizona-Sonora Desert Museum's Save Our Saguaros Map-a-thon 2021, Arizona records from the USGS Nonindigenous Aquatic Species database, non-natives in the Grand Canyon fish database, and data from the Arizona Game & Fish Department.

Learn more and create an account at

imapinvasives.org

- ✓ Explore the database
- ✓ View the iMap StoryMap
- ✓ iMap Network-wide Q&A panel (recording)
- ✓ Learn more about the iMap network

Pennsylvania

Western Pennsylvania Conservancy and Pennsylvania Natural Heritage Program

"I really enjoyed participating in the 2021 Water Chestnut Chasers Challenge (WCCC). Being my first time, I wasn't exactly sure what to expect when I signed up to volunteer. But the use of the iMapInvasives mobile app and website made gathering data and submitting findings a breeze…

… Together, between the support from the WPC and the functionality of the iMapInvasives app, becoming a "community scientist" and participating in the WCCC was a great experience. It was also a good excuse to plan a trip, get outdoors, learn something new, and help support the efforts of invasive species management."

- Quote from Brian Beinhauer, Volunteer iMap user

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Maine

Maine Natural Areas Program (MNAP)

An Invasive Plant Academy was held by the Maine Forest Service and MNAP to train foresters, land trust stewards, landscapers, arborists, licensed herbicide applicators, and other natural resource professionals in how to use iMapInvasives to map invasive plants and prepare invasive plant management plans. Seventy-five new iMap users mapped 944 new locations of 24 species of invasive plants as a result of this new project.

In 2021, MNAP staff surveyed nearly 13,000 acres of state lands for invasive plant species, and about 2,000 acres of private lands for Japanese stiltgrass and perennial pepperweed. Treatment and follow-up was conducted on over 74,000 acres on state lands and 350 acres on private lands.

New York

New York Natural Heritage Program (NYNHP)

Record 1152072: Spotted lanternfly reported by a volunteer.

In partnership with the *NYS Department of Agriculture and Markets*, NYNHP launched a community science mapping initiative to complement statewide monitoring efforts for a high priority invasive pest, spotted lanternfly, and its preferred host, tree-of-heaven.

State partners selected priority locations across NY for volunteers to "claim" and survey throughout the year. Volunteers submitted presence & not-detected records using the *iMap Mobile app,* and NYS agency staff confirmed reports by reviewing photos and conducting on-the-ground surveys as needed.

Through partnerships with statewide, regional, and local organizations, we were able to promote this effort widely, leading to the submission of **2000+** observations in 2021.

Interested in Joining the iMapInvasives Network?

Visit **imapinvasives.org/members**