Citizen Science Training Workshop

Lesson I: Introduction to Invasives

Your Name – Your Title
Natural Resource Ecology Laboratory
Colorado State University

The Training Workshop Title
2007 Annual Meeting
Location, CO

May 30, 2007
What are invasive species?

- Non-native species
  - an organism that is not indigenous to a given area and has been accidentally or deliberately transported to a new location by human activity

- Invasive species
  - A subset of non-native species that are expanding outside of their native range and are likely to cause harm to the economy, environment, or human health
  - all non-native species are not invasive

- Noxious species
  - species legally designated as a pest by a county, state, or federal agency
“On a global basis...the two great destroyers of biodiversity are, first habitat destruction and, second, invasion by exotic species”

-E.O. Wilson
The Problem

- 49% of imperiled species are listed because of invasive species

Photo: Emily Kapler, Plants of Concern
The Problem

- $120 billion spent annually in the US on control and restoration efforts
Affecting All Ecosystems

Terrestrial...

Aquatic...

Marine...

Photo: Linda Hurt

Photo: Great Smoky Mountains Nat. Park, USDI NPS

Photo: Willey Durden, USDA ARS, Bugwood.org
The Invasion Process

Negative effects, displacement, or extinction of native species

Globalization increases movement of terrestrial and aquatic organisms

Introduction of a non-native species into ecosystems without natural pests or predators
Invasive Animals

Photo: Gordon Rodda, USGS

Photo: David Cappaert, MI State University, Bugwood.org
Invasive Diseases
What We’re Doing

- Prevention
- Early Detection and Rapid Response
  - Eradication
  - Containment
- Research
What We’re Doing

- Control Methods
  - Mechanical
  - Chemical
  - Biological
Restoration

Photo: Chris Schnepf, University of Idaho, Bugwood.org

Photo: Chris Schnepf, University of Idaho, Bugwood.org
What We’re Doing

- Collaboration

Photo: Neil Most, NASA
What You Can Do

- Volunteer
- Learn about invasives in your area
- Learn to identify invasive species and report new sightings
- Do not transmit invasive species
- Spread the word by educating others

Photo: Linda Hurt

Photo: NISS