

Invasive Plant Species Protocol

Field Guide

Task

To photograph, identify the plant species and record their cover in vegetation sampling subplots in an Invasive Plant Species study site.

NOTE: This may be done as a one-time-only exercise at a given study site or the study site may be visited a number of times to monitor the changes in the plant cover through the plant growing season.

What You Need

- Invasive Plant Species Site Definition Field Guide and Data Sheet* and materials (first visit only)
- Surveyor's stakes, GLOBE flags or wooden pegs
- Ball of twine or string (~200 m)
- 50 m tape measure
- Biometry Field Guide and Data Sheet* and materials (first visit only)
- Land Cover Investigation Instruments* guide
- Plant reference materials (guides for invasive and local (native) plants)
- Invasive Plant Species Inventory Data Sheet*
- Land Cover Biometry Protocol* guides, data sheets and materials
- Digital camera (with extra batteries)
- Hand lens
- Pencil or Pen
- Clipboard

In the Field

First Visit:

1. Set-up the site and complete the *Invasive Plant Species Investigation Site Definition Data Sheet* (see *Invasive Plant Species Investigation Site Definition Guide*).
2. Characterize the vegetation of the site in a general fashion using aspects of the *Biometry Protocol in the Land Cover/biology GLOBE Investigation*. Specifically, describe the land cover:
 - a. Multiple layers of vegetation: trees (> 5.0 m), shrubs (0.5 m to 5.0 m) and ground cover
 - b. Closed forest (mostly trees)
 - c. Woodland

- d. Shrubland
 - e. Herbaceous
3. Perform the appropriate measurements to document the basic characteristics of the vegetation. These include:
 - a. Canopy Cover and Ground Cover – Field Guide
 - b. Graminoid, Tree and Shrub Height – Field Guide
 - c. Tree Circumference – Field Guide
 - d. Grainoid Biomass – Field and Lab Guide
 - e. Measure Tree Height (various conditions) – Field Guide
 4. Define a number of smaller subplots within the study site. Use the surveyor’s stakes. GLOBE flags or wooden pegs and twine/string to mark out the sub-plots or find the locations for the quadrant frames.
 5. Record the location of each subplot on the *Invasive Plant Species Investigation Site Definition Data Sheet*. Use as many copies of the data sheet as necessary.

For each sub-plot:

6. Complete the top section of the *Invasive Plant Species Inventory Data Sheet*. Use as many copies of the data sheet as necessary.
7. Identify and record all the species within each subplot on the *Invasive Plant Species Inventory Data Sheet* using the plant guides, taking care to note whether the plant species is native or invasive.

<i>Plant's Latin and Common Name</i>	<i>Plant Category*</i>	<i>Height/diameter (m)</i>	<i>Cover (%)</i>	<i>Description (leaves, flowers, seed structures)</i>	<i>Native/invasive</i>	<i>Adopted Habitat</i>	<i>Country of Origin</i>	<i>Eradicate (Y/N) (optional)</i>	<i>Eradication Method (optional)</i>
<i>Acacia meamsii</i> , "Late" Black Wattle	Tree – deciduous, evergreen			Dark olive green, fine hairy leaves are short and crowded; Pale yellow or cream flower heads; Dark brown seed pods	Invasive	Grasslands, roadsides and water courses	SE Australia, Tasmania		

*Trees (conifer, deciduous (may be evergreen)), shrubs, water plants/aquatics, grasses, reeds or grass-like, herbs, lichens and mosses

8. Record any unusual or helpful metadata on the *Invasive Plant Species Inventory Data Sheet*.
9. Take a photo of the dominant species with the camera.

Subsequent Visits:

10. Complete steps 4-9 for each new subplot. Note that an *Invasive Plant Species Investigation Site Definition Data Sheet* has to be completed for each visit. For subsequent visits to the same site, choose the Metadata Update option in the third line of the data sheet and create a plan-view of the new subplot layout.

In the Classroom

11. Download and rename the site images.
12. Submit all of your data to GLOBE.