2002 Massachusetts Envirothon
Current Issue Problem

Introduced Species and Biodiversity

Introduction

Earlier this year your team received eight pages of "Questions and Resources for Team Preparation" to help you prepare for this problem.

In order to respond to this problem, your team will need to do some investigation. You will need to talk to a variety of people in your community, make observations in the field, and study print and web based resources.

If you do a thorough job, you will not only score well but you will qualify for Mass Envirothon's new Silver Award, which recognizes teams for their community investigations. For more information, contact Debi Hogan (508/336-4426 or dchogan@sprynet.com) or Will Snyder (see below).

If you have questions on how to prepare your current issue presentation, contact Will Snyder at UMass Extension (413/545-3876 or wsnyder@umext.umass.edu).

The Problem

Your community is considering whether and how to take action to protect local biodiversity. This is a new concept to many people, and these are tough budget times. Citizens are skeptical.

Your team has been asked to make a presentation that will introduce citizens to the impact that introduced species may have on local biodiversity. Your goal is to alert and inform your audience so that they will support sound management decisions.

You may decide to focus on a particular invasive species crisis, or you may decide to present a more general picture of introduced species and biodiversity. In either case, you know that in order to reach your audience you will need to use specific local examples of natural communities and land uses, and at least one example of a specific introduced species and its interaction with the local ecosystem.

Some Tips for Your Presentation

Start by telling your panel of judges who you are and what town and watershed you are from.

Biodiversity is a big idea. Take every opportunity to show the judges what you understand this term to mean, both in theory and practice.

Show the judges how you know what you know. Let them see the variety of sources you drew on, and how you evaluated them.

You will have 15 minutes for your presentation, followed by a 10 minute question period.

In Your Presentation, You Should:

Introduce your area of investigation - watershed, region, town, or large land parcel

Introduce the land's biodiversity - topography and water resources, natural communities, species of special note, and your general assessment of ecosystem health.

Illustrate your points with maps of appropriate scale, including the MassGIS map and BioMap supplied to you.

Explain how land use and ecological communities have changed in this place over time

Provide your best judgment about which are the most significant introduced species in this area in terms of impact on biodiversity.

Report on activities that are protecting biodiversity in your area

What is being done that protects biodiversity?

What organizations and individuals are doing the work?

Note any special efforts to protect endangered or threatened species.

Note any prevention and control efforts aimed at particular invasive species. Explain any strategies for management, including who is involved and what the costs are.

Tell a compelling story about the introduced species you focused on, and its significance to biodiversity

Explain why you chose to focus on this species.

Describe the species' most important characteristics, its life cycle, the ecological niche it fills.

Recount the history of the species, its home range, how and when it was introduced, how it spreads.

Note any research questions related to biodiversity, if any, that are being asked about this species.

Explain any economic or other quality of life effects caused by this introduction, positive and/or negative.

Explain whether, in your judgment, this species is a threat to biodiversity and describe what action(s), if any, should be taken to ensure that local biodiversity is not degraded because of this species.