Natural Community Identification Training

Regional Conservation Planning Program

Manomet Center for Conservation Sciences

www.manomet.org

Support provided by

MASSACHUSETTS ENVIRONMENTAL TRUST

Before we begin…

Please make sure that you have the following:

- Clipboard and pencil (return)
- Participant survey form* (off-white)
- Workshop evaluation form** (yellow)
- Guide to the natural communities…
- Workshop CD
- Natural community ID form
- Copy of presentation

* Please fill out and turn in at beginning of workshop.
** Please fill out and turn in at end of workshop.

When you leave here today you will:

- Know what natural communities are and why they matter
- Be familiar with Massachusetts' natural community classification system
- Be able to identify natural communities in the field

Today's Presentation

Three Sections:

1. Introduction to Natural Communities
2. How to Identify Natural Communities
3. Examples (indoors and in the field)

Section 1
Introduction to Natural Communities

Dry, Rich Acidic Oak Forest – Attleboro

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Section 1
Introduction to Natural Communities

- What is a Natural Community?
- How Big is a Natural Community?
- Why Identify Natural Communities?
- Natural Community Classification

What is a Natural Community?

Multiple natural communities, Sandy Neck, Barnstable

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What is a Natural Community?

Natural communities are recurring assemblages of plants and animals found in particular physical environments

They are named on the basis of dominant or characteristic vegetation

From: *Sperduto, D. D., and W. F. Nichols. 2004. Natural communities of New Hampshire. Included in workshop CD.*

What is a Natural Community?

(continued)

Natural communities are distinguished by three characteristics:

From: *Sperduto, D. D., and W. F. Nichols. 2004. Natural communities of New Hampshire*

What is a Natural Community?

(continued)

Natural communities are distinguished by three characteristics:

1. definite plant species composition

From: *Sperduto, D. D., and W. F. Nichols. 2004. Natural communities of New Hampshire*

What is a Natural Community?
(continued)

Natural communities are distinguished by three characteristics:

1. **definite plant species composition**
2. **consistent physical structure (e.g., forest, shrubland, grassland)**

From: *Sperduto, D. D., and W. F. Nichols. 2004. Natural communities of New Hampshire*

What is a Natural Community?
(continued)

Natural communities are distinguished by three characteristics:

1. **definite plant species composition**
2. **consistent physical structure (e.g., forest, shrubland, grassland)**
3. **specific physical conditions (e.g., nutrients, water availability, climate)**

From: *Sperduto, D. D., and W. F. Nichols. 2004. Natural communities of New Hampshire*

What is a Natural Community?

(continued)

Natural community descriptions are based on <u>exemplary</u> (i.e., idealized) conditions

Many actual communities differ from idealized communities

What is a Natural Community?

(continued)

Differences between exemplary and real natural communities may be due to:

What is a Natural Community?
(continued)

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***Location* – associated species may vary from north to south, coastal to inland, etc.**

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(continued)

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***Time* – at a given location, communities may change over time**

What is a Natural Community?
(continued)

Differences between exemplary and real natural communities may be due to:

Location **– associated species may vary from north to south, coastal to inland, etc.**

Time **– at a given location, communities may change over time**

History **– historic land use practices, including agriculture**

What is a Natural Community?
(continued)

"No two examples of a community are identical in composition or environment, however, they are similar within a given range of variability."

Edinger et al. 2002. Ecological communities of New York State, second edition.

What is a Natural Community?
(continued)

Natural vs. Ecological Communities

Natural Communities exclude areas created and/or maintained by human activities

Ecological Communities include areas created and/or maintained by human activities

How big is a Natural Community?

Woodland Vernal Pool

How big is a Natural Community?

The answer depends on:

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The answer depends on:

***Community Type* – some are intrinsically small (e.g., forest seep, woodland vernal pool) or large**

How big is a Natural Community?

The answer depends on:

***Community Type* – some are intrinsically small (e.g., forest seep, woodland vernal pool) or large**

***History* – past land use has greatly altered the size and distribution of natural community types.**

Why Identify Natural Communities?

Salt Marsh - Swansea

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Why Identify Natural Communities?

- Communication
- Distribution
- Conservation
- Stewardship
- Planning

Why Identify Natural Communities?

(continued)

Communication

Ecologists, land managers, and others may communicate effectively and reach sound management decisions regarding ecological systems if they are using common terminology

From: *Sperduto, D. D., and K. F. Crowley. 2001. Overview of the natural communities in New Hampshire*

Why Identify Natural Communities?

(continued)

Distribution

Information on natural communities helps identify the likely distribution of plants and animals, both rare and common

Why Identify Natural Communities?

(continued)

Conservation

Biodiversity protection requires the protection of "…viable natural communities, especially functional assemblages of communities, that retain their full complement of native plants and animals."

From : Barbour, H., T. Simmons, P. Swain, and H. Woolsey. 1999. Our irreplaceable heritage: protecting biodiversity in Massachusetts

Why Identify Natural Communities?

(continued)

Stewardship

Information on the type and condition of a natural community helps us identify if stewardship/management is needed

Why Identify Natural Communities?

(continued)

Planning

Open Space and Recreation Plans must include:

4.D.1. "General inventory – mention important plants and *plant communities* that characterize the area;"

From: *Division of Conservation Services. 2001. Open Space and Recreation Plan requirements*

Natural Community Classification

Deep Emergent Marsh (in part)
Burrage Pond WMA – Hanson and Halifax

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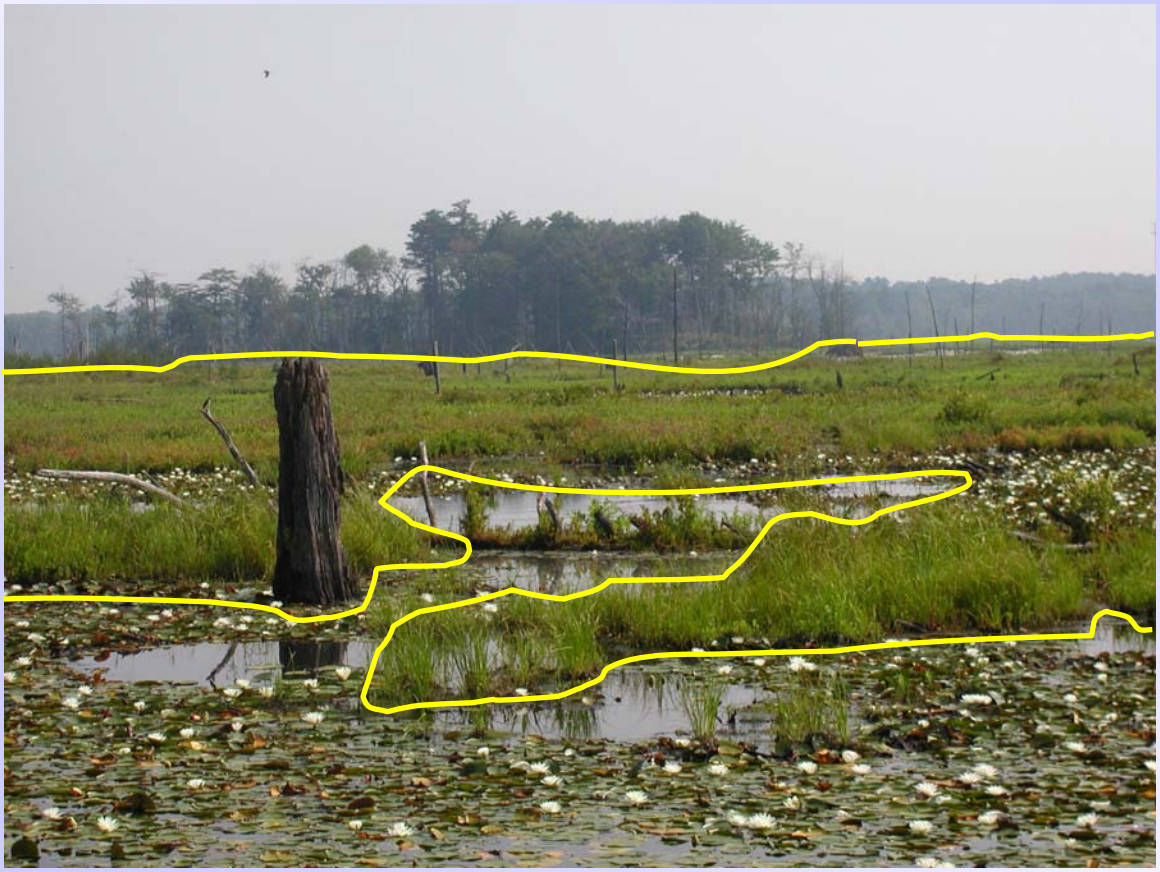
Natural Community Classification



Deep Emergent Marsh (in part)
Burrage Pond WMA – Hanson and Halifax

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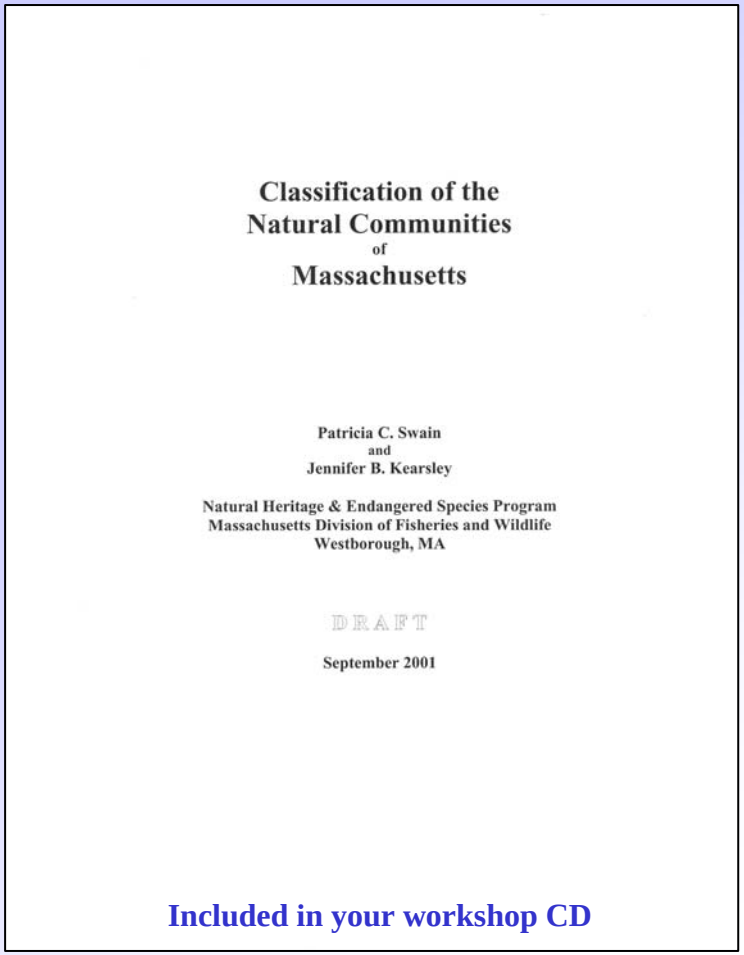
Natural Community Classification

An official list of the natural communities of Massachusetts has been developed by the Massachusetts Natural Heritage and Endangered Species Program (NH&ESP)



Included in your workshop CD

Natural Community Classification (continued)

There are currently 105 recognized natural communities in Massachusetts

Well-studied communities (e.g., floodplain forests, acidic peatlands, Atlantic white cedar swamps) are more finely divided than poorly studied communities

Natural Community Classification (continued)

The 105 natural communities are grouped into three major sections, referred to as "Systems":

1. **Terrestrial**
2. **Palustrine**
3. **Estuarine**

Aquatic communities are <u>not</u> addressed in this classification

Natural Community Classification (continued)

Terrestrial System

Vegetation not significantly influenced by standing water

Further classified on the basis of structural dominance (e.g., shrub vs. tree)

Black Oak-Scarlet Oak Forest/Woodland
Freetown Fall River State Forest

Natural Community Classification (continued)

Acidic Shrub Fen

Palustrine System

All freshwater, non-tidal wetlands

Further classified on the basis of structural dominance (e.g., herbaceous vs. tree)

Does not include submersed or floating-leaved aquatics, or tidal wetlands

Natural Community Classification (continued)

Estuarine System

Subject to varying salinity, tidal actions, and wind

Further classified on the basis of structural dominance (e.g., mud flat vs. trees)

Extend from sub-tidal flats landward and upstream to where salt or tides influence vegetation

Estuarine Intertidal Flats (low tide)

Natural Community Classification (continued)

No key or field identification guide is included in Swain and Kearsley

Organized into sections (i.e., Systems) by water (absent, fresh, salt), then by structural dominance

Users of classification are then advised to use the table of contents as a non-dichotomous key

Natural Community Classification (continued)

For each natural community, Swain and Kearsley provide the following information:

- Name
- Rarity (SRANK)
- Distribution Map
- Environmental Setting
- Habitat Value
- Associated Rare Animals
- Threats
- Inventory Needs
- Authorship
- Code
- Tracked
- Concept
- Vegetation Description
- Associated Rare Plants
- Examples with Public Access
- Management Needs
- Synonyms

Any Questions?