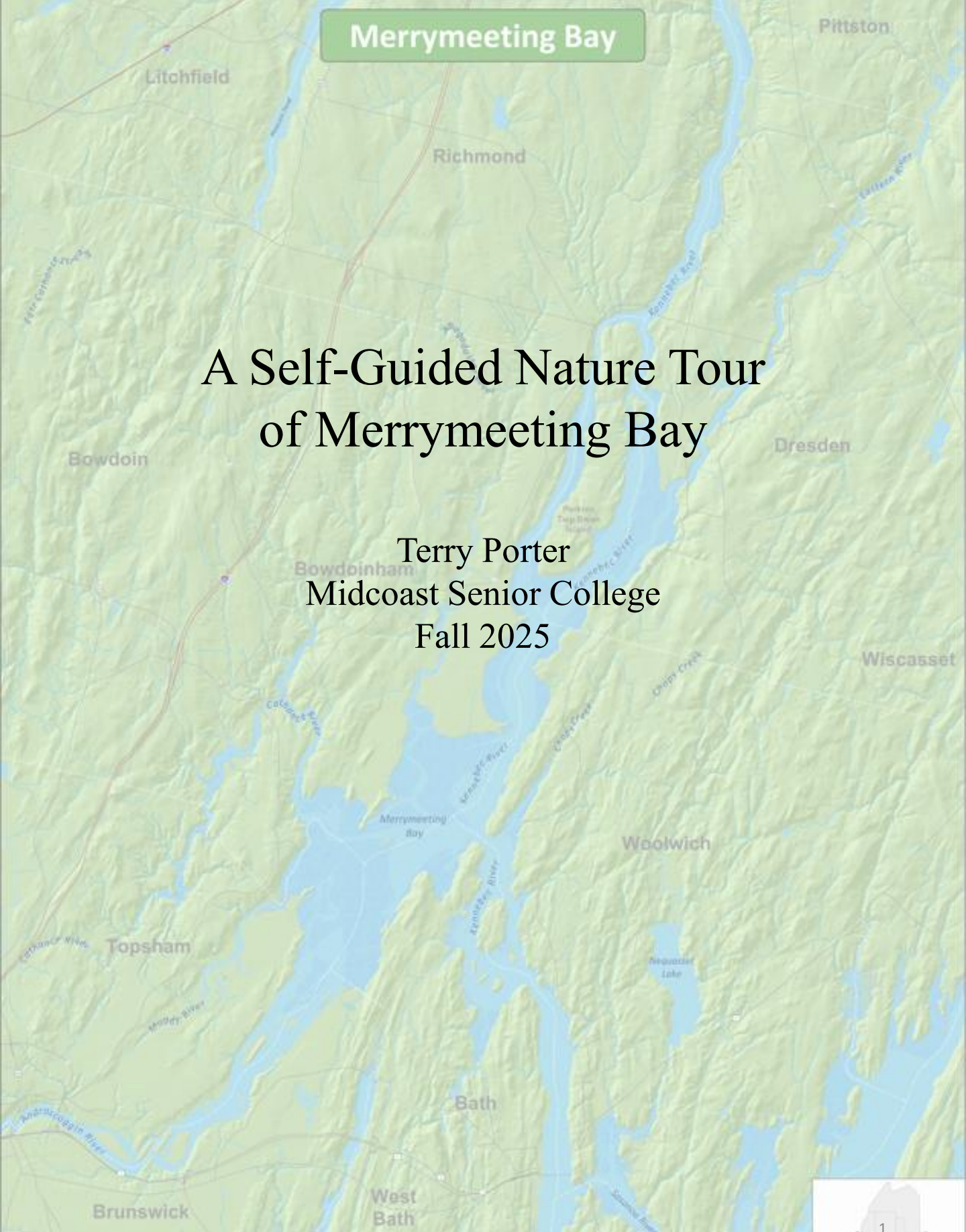


# Merrymeeting Bay

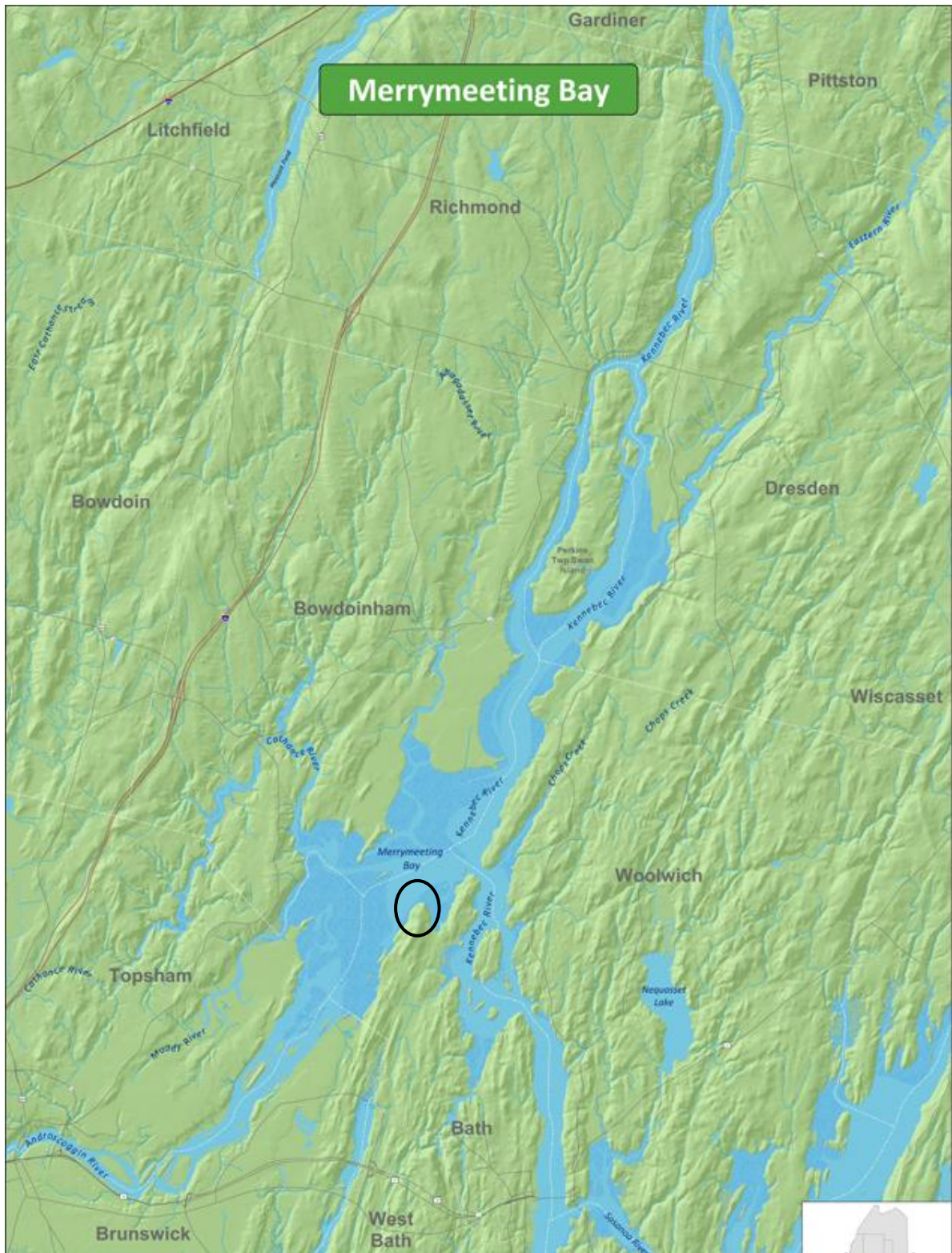
## A Self-Guided Nature Tour of Merrymeeting Bay

Terry Porter  
Midcoast Senior College  
Fall 2025





# Butler Head Preserve, Bath



Friends of Merrymeeting Bay  
Research, Advocacy, Land Conservation & Education  
[www.friendsofmerrymeetingbay.org](http://www.friendsofmerrymeetingbay.org)

0 0.5 1 2 3 4 5 Miles



# Today's Agenda

## Butler Head and surroundings

Elements of Merrymeeting Bay ecosystems so far:

- Water systems & geography
- Food webs
- Mudflats and wild rice
- Habitats and communities, succession
- Ferns

Today:

- *Trees and forests*
- *Fungi and trees*
- *Riparian Zones*



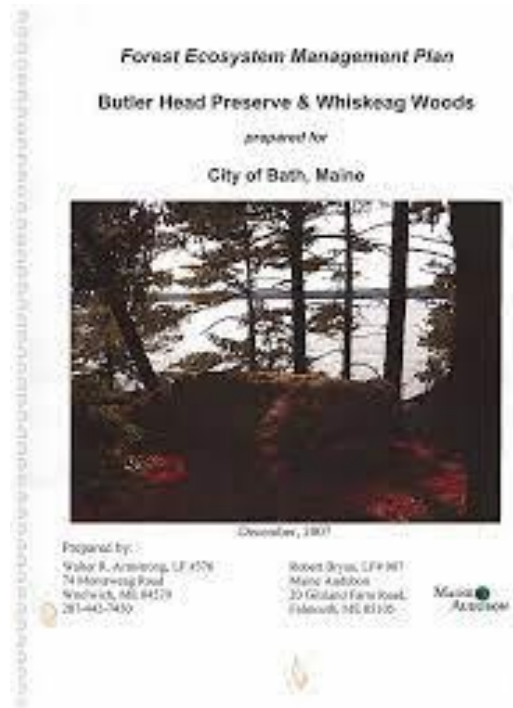


# Butler Head Preserve, Bath

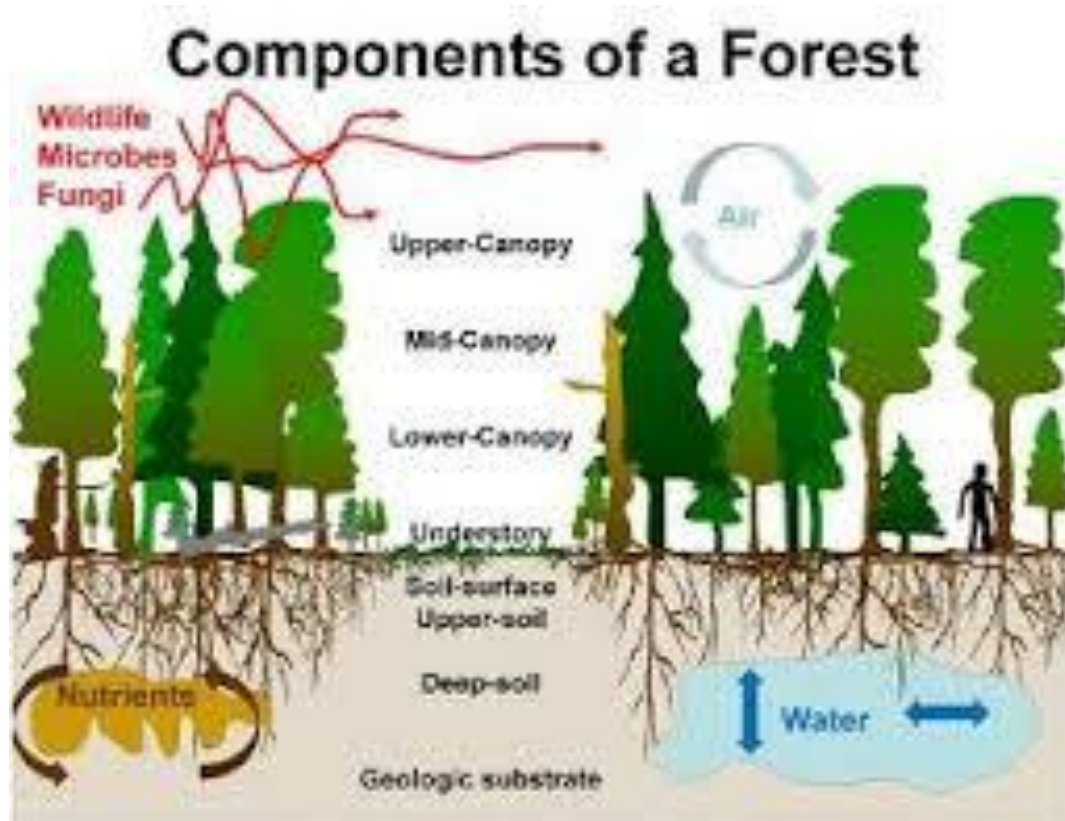


- 141 acres
- Co-managed by
  - City of Bath
  - Bath Community Forestry Committee
  - Kennebec Estuary Land Trust (KELT)

# Butler Head Ecosystem Management Goals



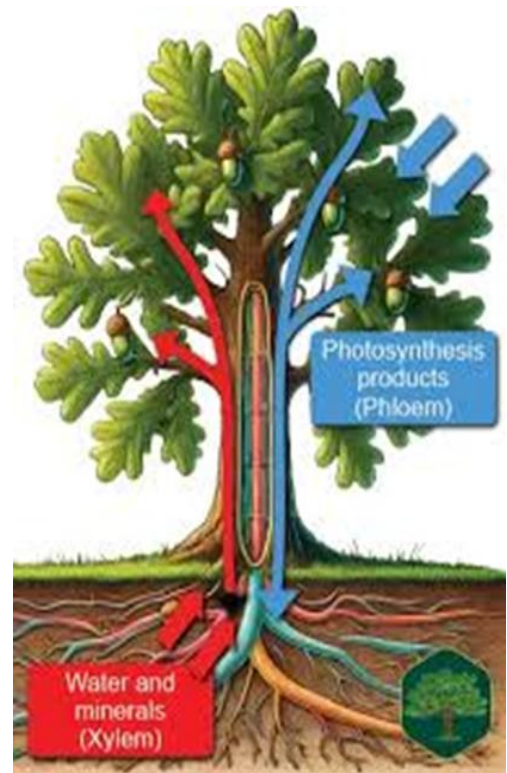
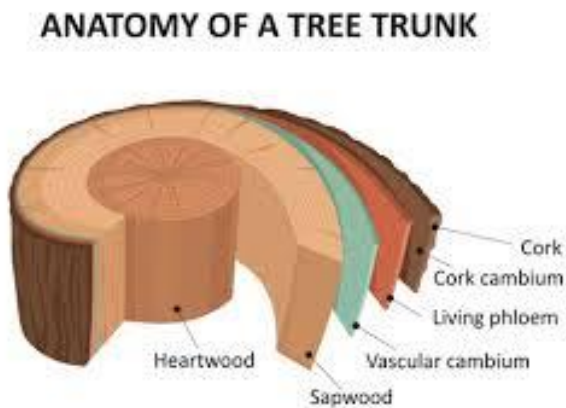
- "Ecosystems Services"**
1. Restore biodiversity.
  2. Provide habitats, including large blocks of mature forest and patches of young forest.
  3. Provide recreational opportunities.
  4. Conserve riparian zones.
  5. Provide timber products and modest income to support property management.



Nutrients and water are absorbed underground.

# What's Special about Trees?

- The living parts of a tree



- Trees create micro-habitats; forests create macrohabitats.
- Species and communities.



# Fungi and Trees: Interwoven Communities



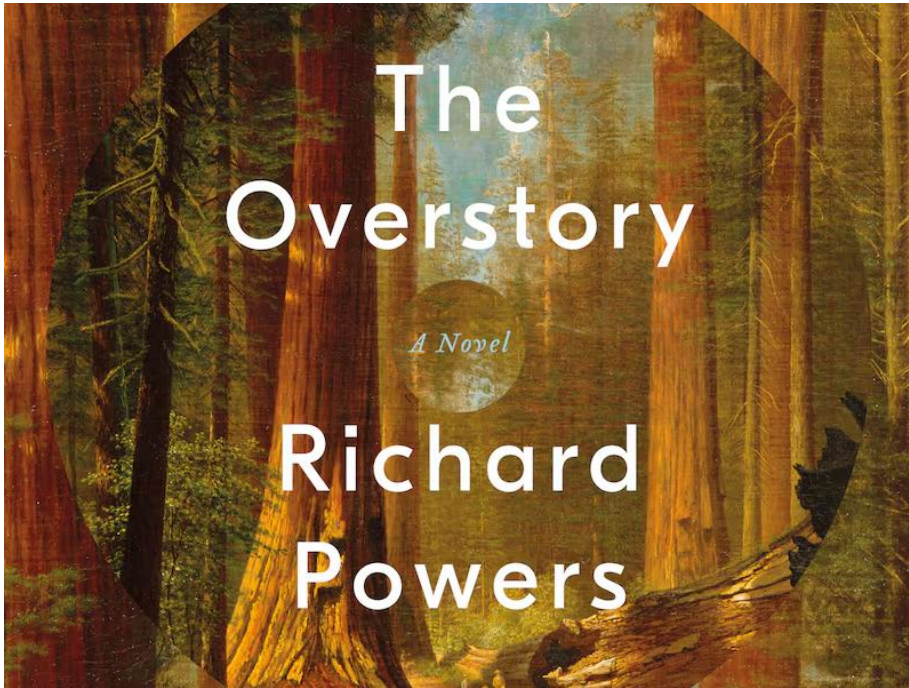
[Mycelium](#)



Hyphae

- A cellular infrastructure connecting trees and forests.
- Hyphae coax open tree roots and tap into them,” exchanging minerals the tree needs for sugars, which the fungi can’t make.
- Crucial mechanism of decay and regeneration.
- Protects, warns, spreads materials and survival information.





- “Mats of [mycorrhizal](#) cabling link trees into gigantic, smart communities...vast trading networks of goods, services and information.”
- “Countless miles of filaments are folded up in every teaspoon of soil.”
- “...there are no individuals in a forest, no separable events...a third of the food a big tree makes may go to feed other organisms.”
- “...it’s useful to think of forests as enormous spreading, branching, underground super-trees.”

# Trees and Humans

- Trees and humans share 60% of their DNA.
- Humans breathe in oxygen and exhale carbon dioxide, while trees breathe in carbon dioxide and exhale oxygen.





## Two parking areas at Butler Head: Kiosk at first parking lot





# Tree Community Types at Butler Head



Northern hardwood forest

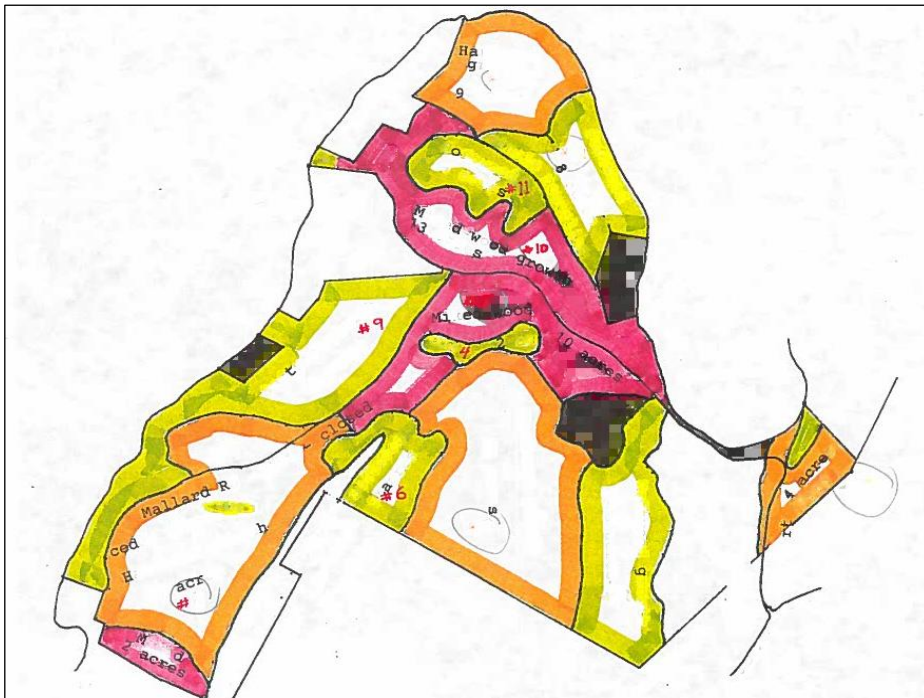


Northern conifer (softwood) forest

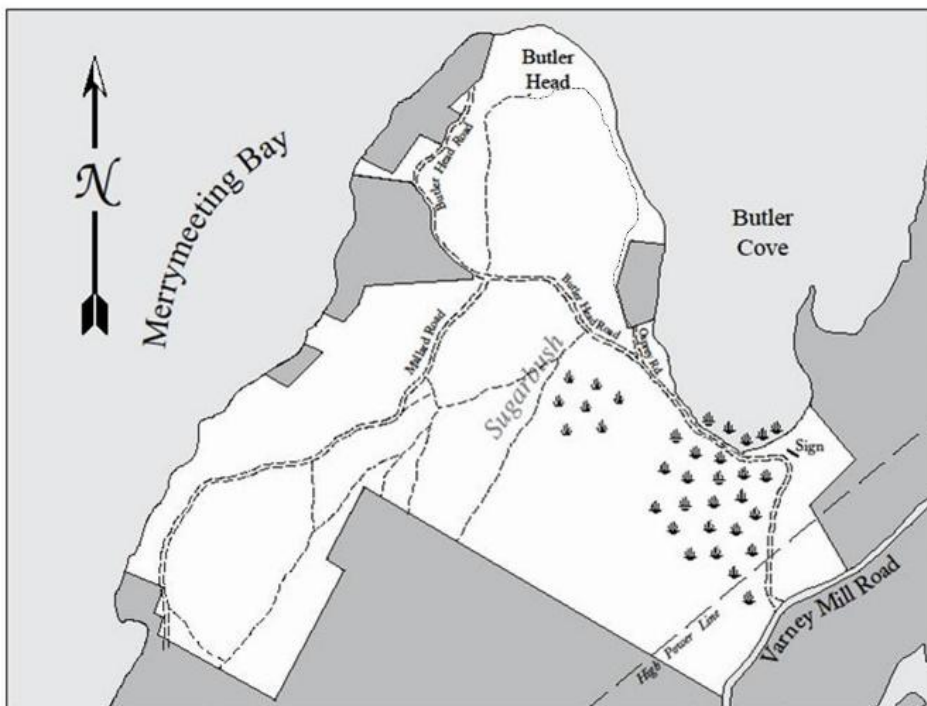


Northern oak – pine (mixed) forest

# Tree Communities and Trail Map



Orange = Hardwoods; yellow = Softwoods; Red = Mixed





# A small forest products industry: Maple sap collection at Butler Head





# Maple Sugaring



Clockwise from above: gathering sap with buckets; the traditional sugar house; the wood-fired evaporator; pouring off the finished syrup.

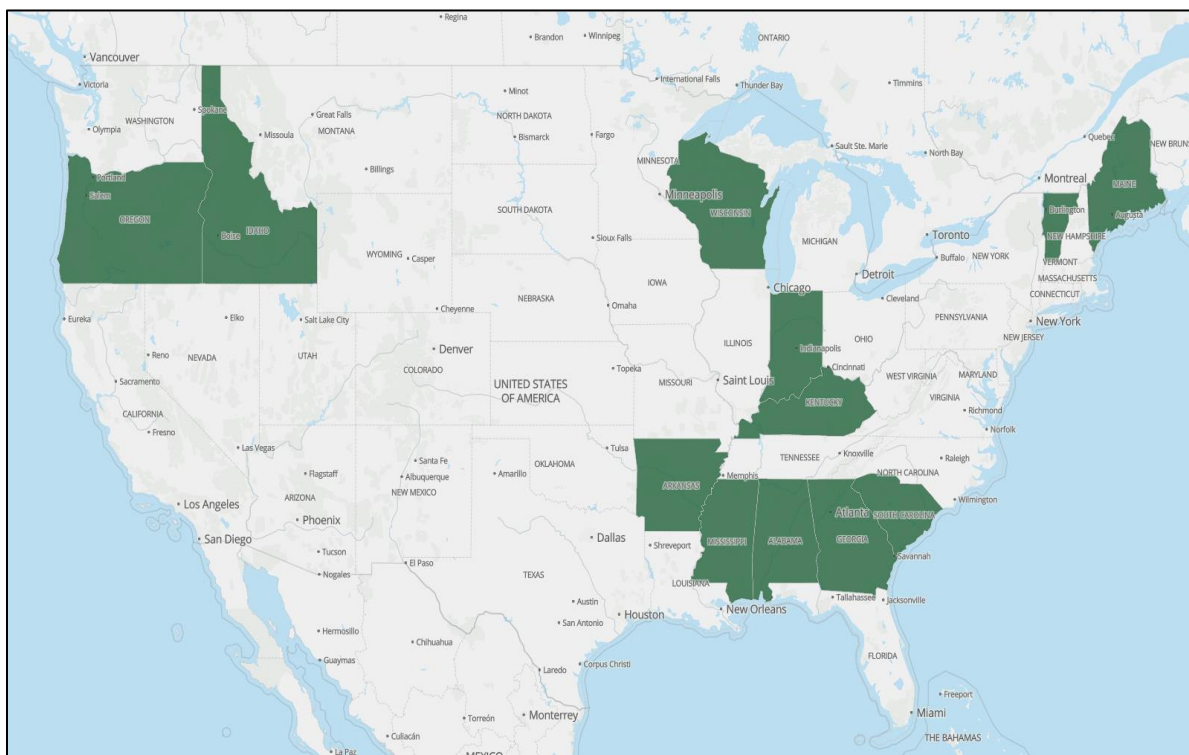
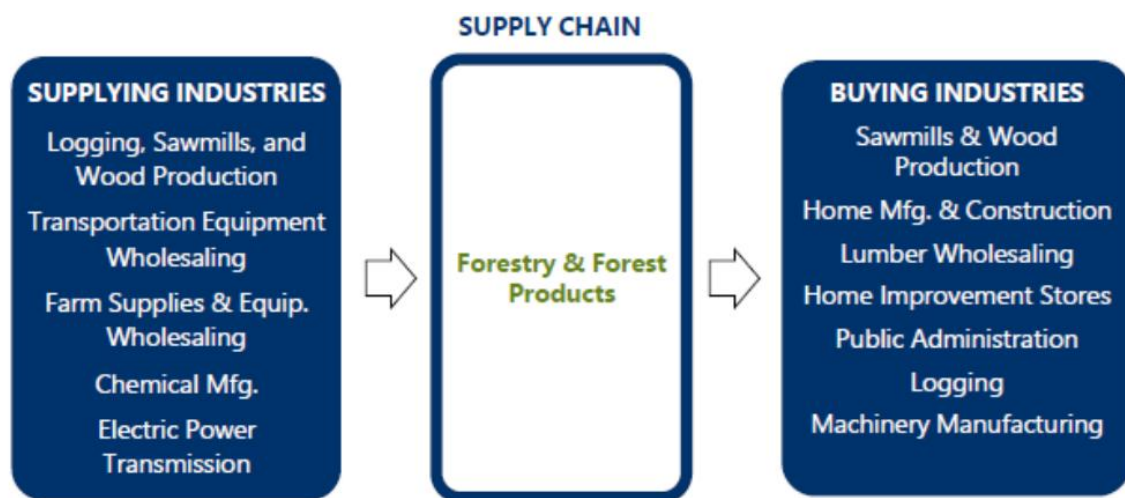


# The Maple Economy in Maine

- Maine is the third-largest maple syrup-producing state in the U.S.:
  - 575,000 gallons annually.
  - \$55 million in economic activity (state GDP \$77.5B).
  - More than 800 jobs.
  - Approximately 450 licensed producers: many small, high-quality, artisan businesses.
- Maine's **forest products industry** is a major economic driver:
  - \$8.5B in 2023 output
  - 31,000 associated jobs (2.5%)



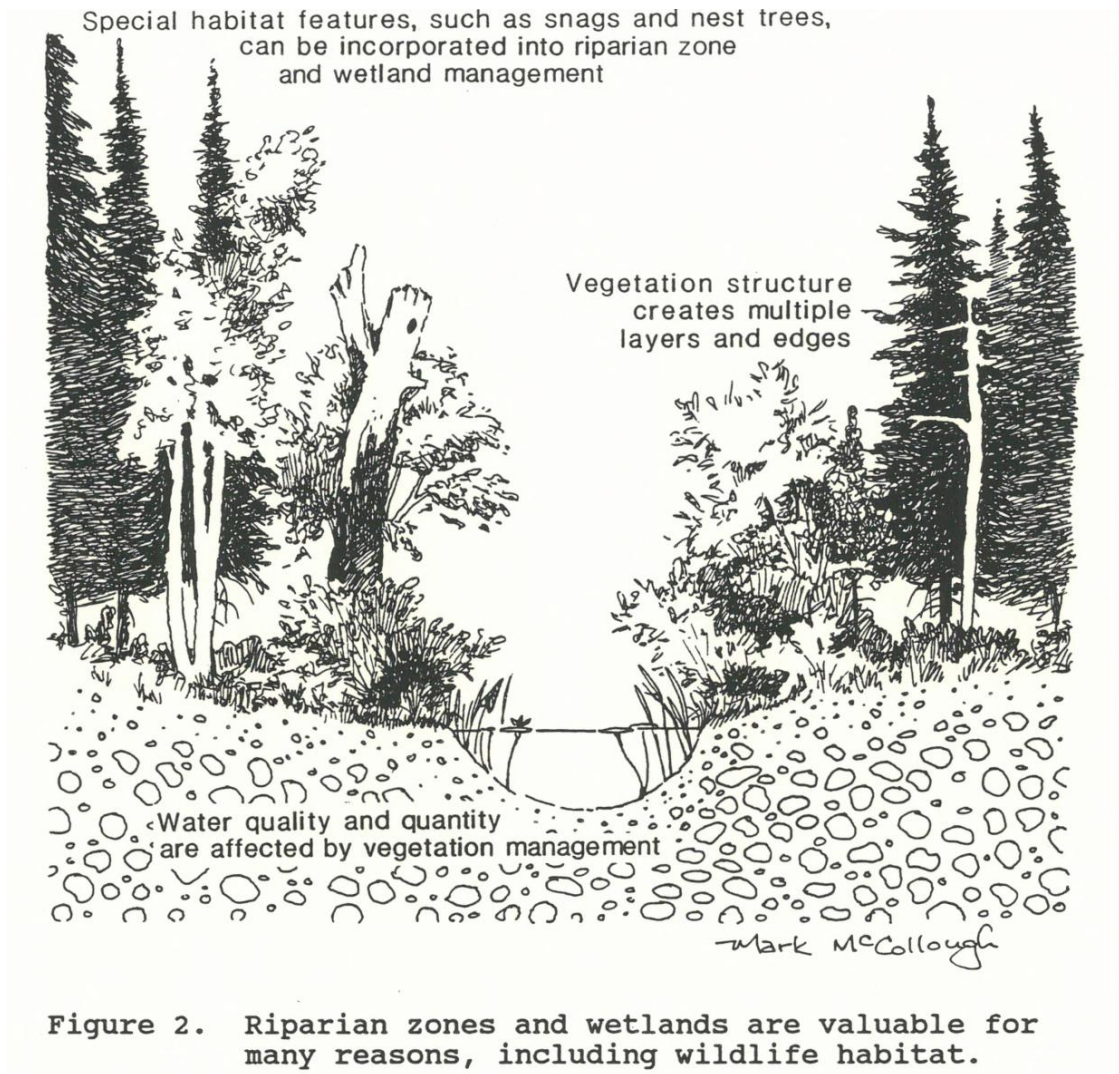
# The Maine Forest Products Industry



Major Players in the Forest Products Industry,  
by Density of Industry in State's Economy



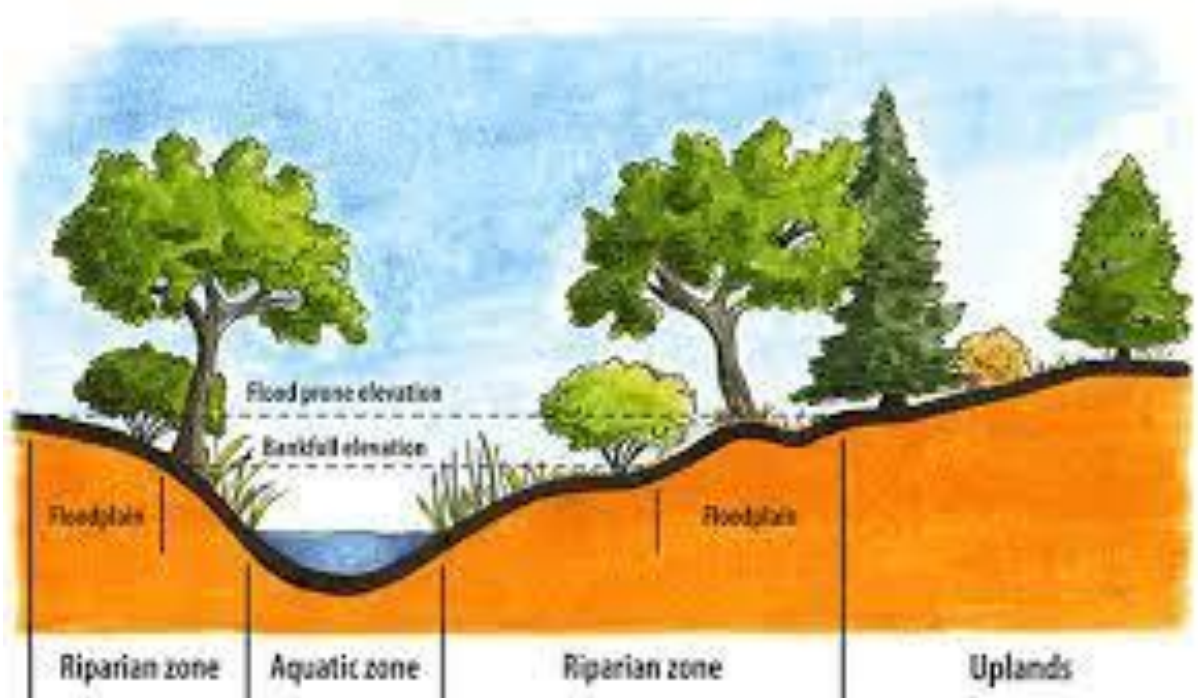
# Riparian Zones – Zones of Transition



[Riparian Zone Video](#)

# Healthy Riparian Zone

- Approx. 80% of Maine's wildlife species use riparian areas at some point in their lifecycle.
  - Habitat restoration prioritizes native species with high biodiversity impact:
    - Songbirds,
    - Raptors,
    - Cold-water fish species,
    - Mammals
- *Maine Audubon, Summer 2025*





# Butler Cove Riparian Zone

