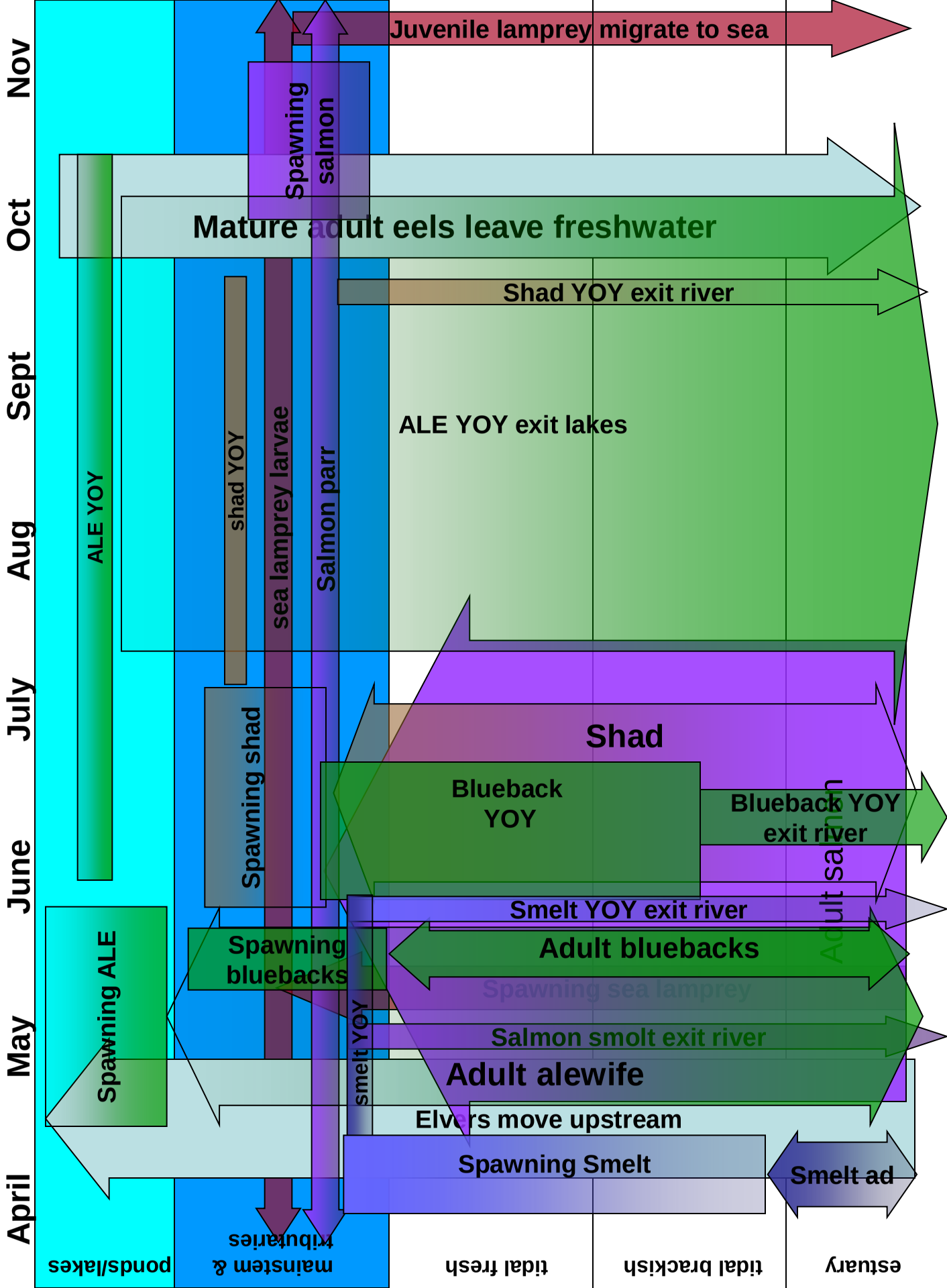
Diadromous Species Restoration Research Network (DSRRN): A Five-year Collaborative Effort

Who is DSRRN?

Principal Investigators: David Hart, Karen Wilson, Peter Vaux, and Adria Elskus
Research Coordinator: Karen Wilson
Science Information Coordinator: Barbara Arter

Core Partners:
The Nature Conservancy
NOAA
Lower Penobscot Watershed Coalition
Maine Department of Environmental Protection
Maine Department of Inland Fish and Wildlife
Maine Department of Marine Resources
Dept. of Fisheries and Oceans
Boston College
Penobscot River Restoration Trust
Penobscot Indian Nation
University of Southern Maine
University of Maine

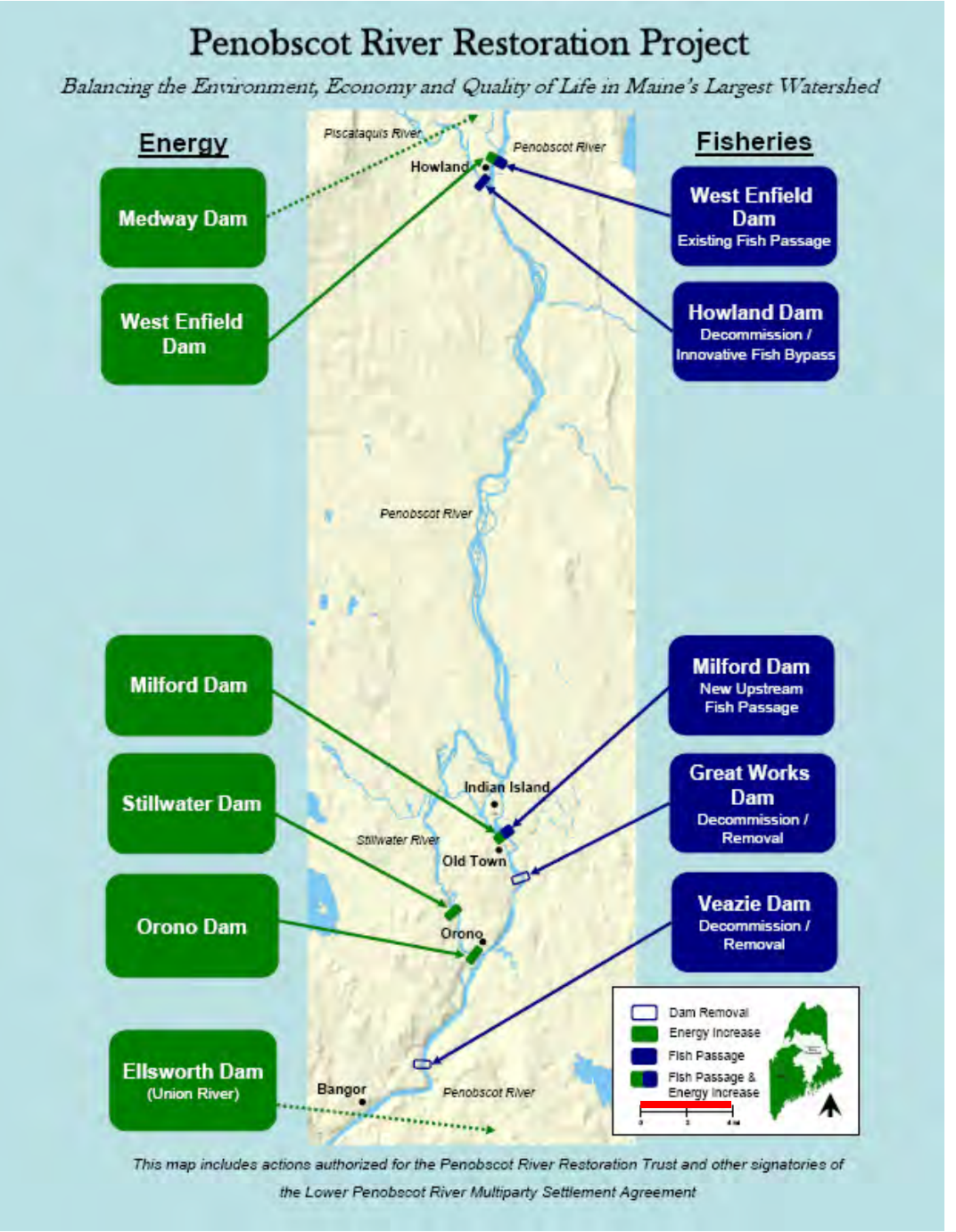
Anyone is welcome! This is a network!


Nov
Oct
Sept
Aug
July
June
May
April
Juvenile lamprey migrate to sea
Spawning salmon
Mature adult eels leave freshwater
Shad YOY exit river
ALE YOY exit lakes
ALE YOY
shad YOY
sea lamprey larvae
Salmon parr
Spawning shad
Shad
Blueback YOY
Blueback YOY exit river
Adult salmon
Smelt YOY exit river
Spawning bluebacks
Adult bluebacks
Spawning ALE
Spawning sea lamprey
Salmon smolt exit river
smelt YOY
Adult alewife
Elvers move upstream
Spawning Smelt
Smelt ad
ponds/lakes
mainstem & tributaries
tidal fresh
tidal brackish
estuary

Context

Penobscot River Restoration

Penobscot River Restoration Trust
http://www.penobscotriver.org/



DSRRN Objectives

Provide a multi-species, watershed-scale, ecosystem context for agencies, NGO partners and academics conducting diadromous fish research in the Penobscot and other river systems in the North Atlantic region.

Facilitate adaptive exchange so that scientific hypotheses, research plans, and synthetic analyses are informed by stakeholder objectives, management needs, and experienced scientists.

Facilitate the coordination of research programs to ensure spatial and temporal compatibility of data, avoid redundancies, and maximize the ratio of information to effort.

Produce new directions for restoration science by exploring key scientific issues and developing interdisciplinary scientific approaches to diadromous species restoration.

Stakeholder Workshop
to solicit input from public, scientists, & managers
on their restoration goals

Nov 08

First Science Meeting
Restoration of Diadromous Fishes and Their Ecosystems: confluence of science and restoration

Stakeholders, agencies, and NGOs meet with restoration scientists to identify critical research areas in multi-species restoration.

Plenary Speakers
Margaret Palmer, University of Maryland
David Montgomery, University of Washington
Gérald Chaput, Fisheries and Oceans, NB, Canada
George Pess, Northwest Fisheries Science Center

Poster Sessions

July
22-24th
2009
Univ. of Maine
Orono

Ecosystem Interactions

Are there synergistic interactions between co-evolved species such that the presence of co-evolved species increases productivity?

What is the relationship between diadromous species as native FW mussel host species and, say, water quality as affected by mussels?

Timing and magnitude of seaward migration of diadromous fishes - impacts on nearshore marine food webs?

What is the role of marine-derived nutrients in FW systems relative to terrestrial or anthropogenic sources?

Interactions between habitat use and legacy geomorphological features.

Science For & From Restoration (Restorations as Experiments)

Adaptive management of restoration efforts: how to incorporate a change of plans into a restoration experiment.

Testing ecological assembly rules with multi-species restoration: does the order of reintroduction matter?

What role does contemporary evolution play in the adaptive dynamics of restoration scenarios?

How do contemporary alterations to ecosystems (i.e., novel species assemblages, water quality issues, altered flow regimes) affect biological restoration potential?

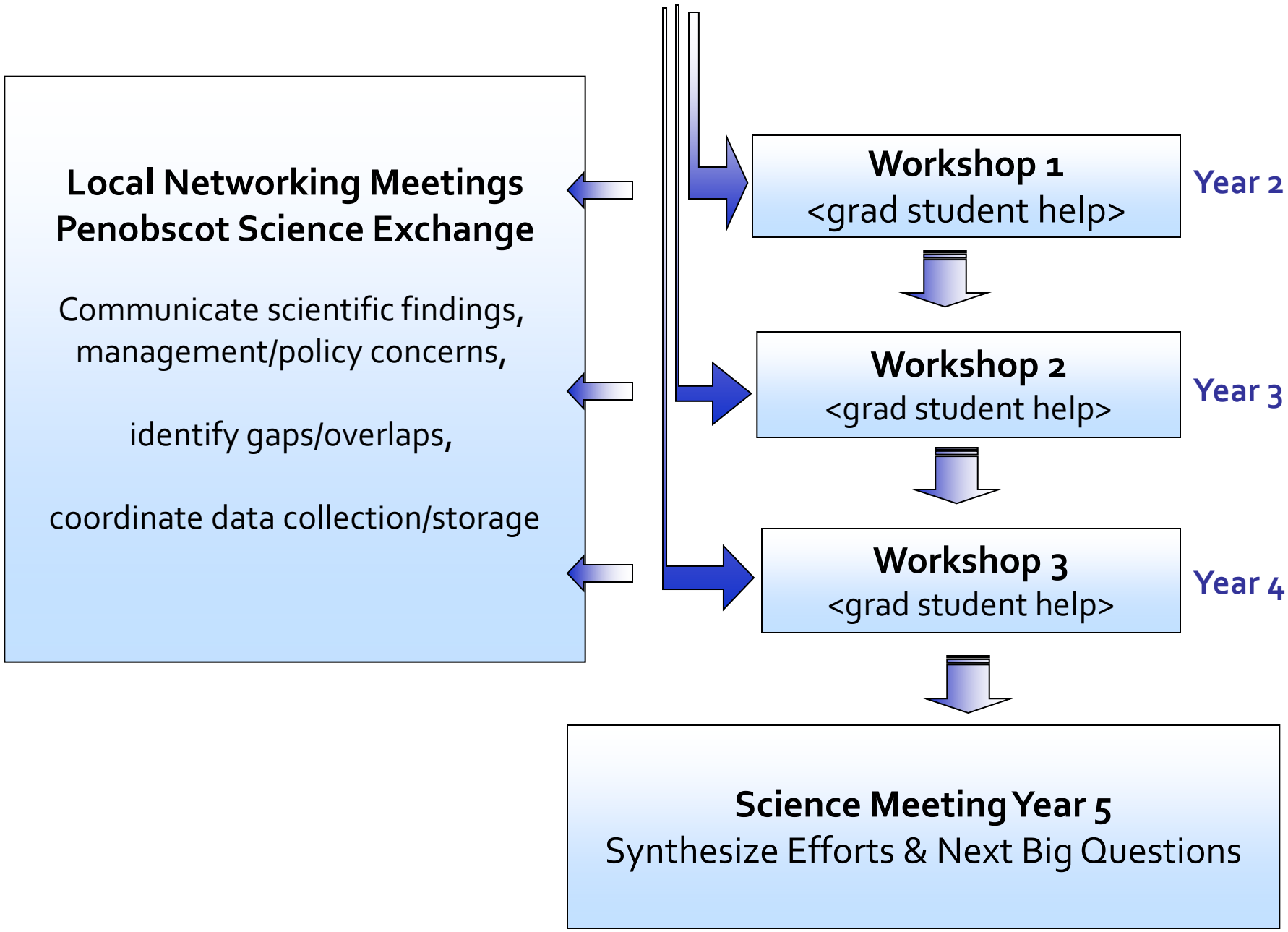
Natural Variability

What is the natural variability in diadromous fish populations when dams are not a factor?

What criteria should be used to set restoration targets? What baseline populations numbers should be used?

What is the carrying capacity of systems today vs. historically?

Are there regional or world-wide trends in population change?


Local Networking Meetings
Penobscot Science Exchange
Communicate scientific findings, management/policy concerns,
identify gaps/overlaps,
coordinate data collection/storage
Workshop 1
<grad student help>
Year 2
Workshop 2
<grad student help>
Year 3
Workshop 3
<grad student help>
Year 4
Science Meeting Year 5
Synthesize Efforts & Next Big Questions

We want you!

- Attend the Science Meetings and workshops
- Check the website

  http://www.umaine.edu/searunfish/
- Contact us:

  Barbara Arter

  Karen Wilson: kwilson@usm.maine.edu