

# Ecological Significance of Kennebec Estuary

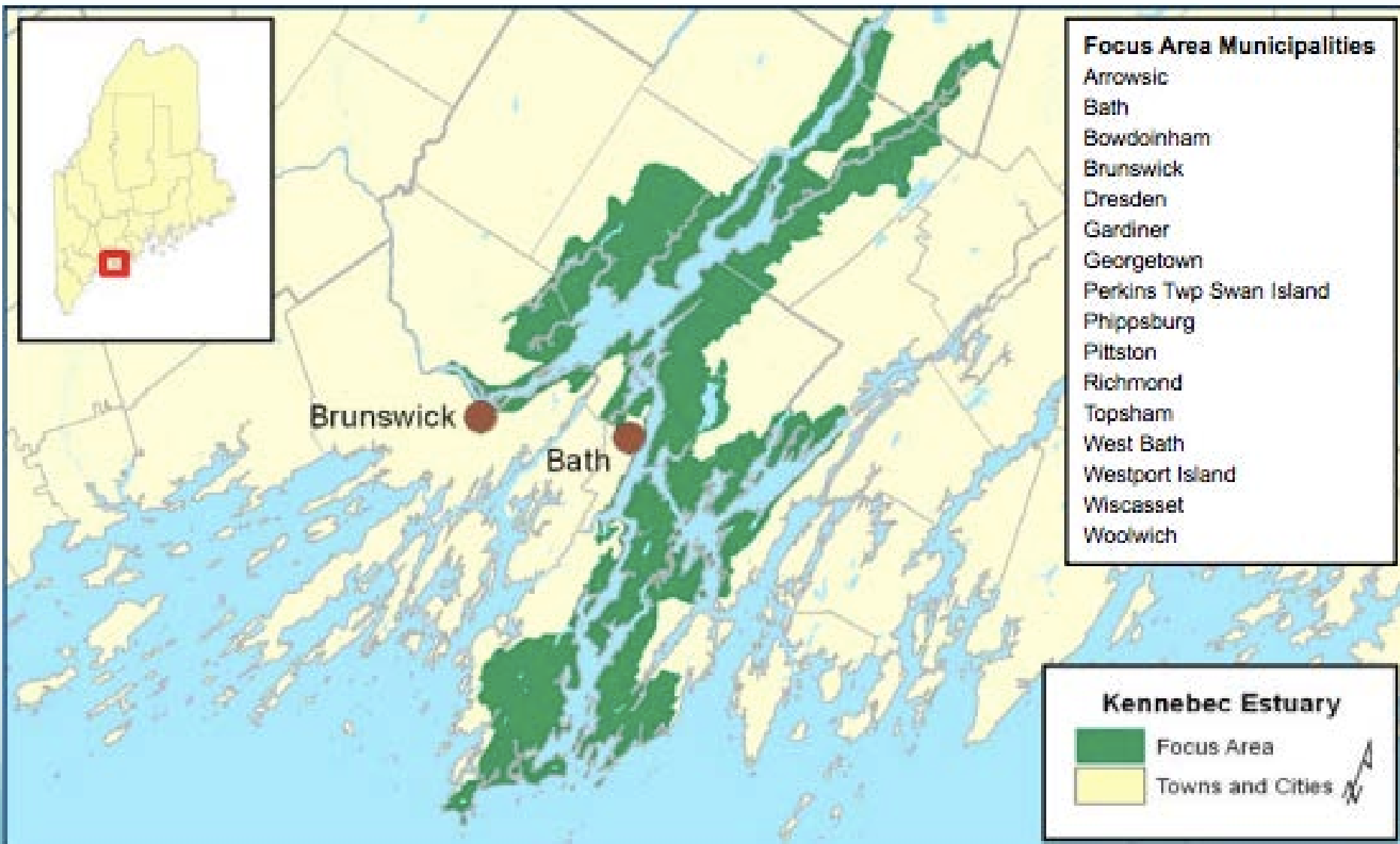
Mitch Hartley



# Ecological Significance

Six rivers converge to form Merrymeeting Bay:




- **Kennebec**
- **Androscoggin**
- Cathance
- Abagadasset
- Muddy
- Eastern



**Focus Area Municipalities**

- Arrowsic
- Bath
- Bowdoinham
- Brunswick
- Dresden
- Gardiner
- Georgetown
- Perkins Twp Swan Island
- Phippsburg
- Pittston
- Richmond
- Topsham
- West Bath
- Westport Island
- Wiscasset
- Woolwich

**Kennebec Estuary**

-  Focus Area
  -  Towns and Cities
- 

# Global Significance

Inland delta formed by two major river systems

Other examples:

- San Juaquin – Sacramento
- Brahmaputra-Ganges
- Euphrates-Tigris



# Ecological Significance

Large, freshwater tidal marsh complex

Drains ~40% of Maine's freshwater

~20% of Maine's tidal marsh (25k acres)



# Ecological Significance

- Diverse set of rare & exemplary habitats
- Several threatened/endangered species
- All diadromous fish species in Gulf of Maine
- Sandy beaches & dunes
- Globally-rare pitch pine woodland



# Ecological Significance

Lilaeopsis

Mudwort

Dwarf Bulrush

Marsh Bulrush

Dry Land Sedge

Yellow Pond-lily

Clammy Azalea

Pygmyweed

Tidal Spikerush

Stiff Arrow-head

Parker's Pipewort

Mountain-laurel

Marsh-elder

Water Pimpernel

Eaton's Bur-marigold

Estuary Bur-marigold

Long-leaved Bluet

Estuary Monkeyflower

Smooth Sandwort

Beaked Spikerush

Long's Bitter-cress

Spongy Arrow-head

Narrow-leaf Arrowhead

Sweet Pepper-bush

Small Salt-marsh Aster

Horned Pondweed

Saltmarsh False-foxglove

Large-purple False Foxglove

# Ecological Significance

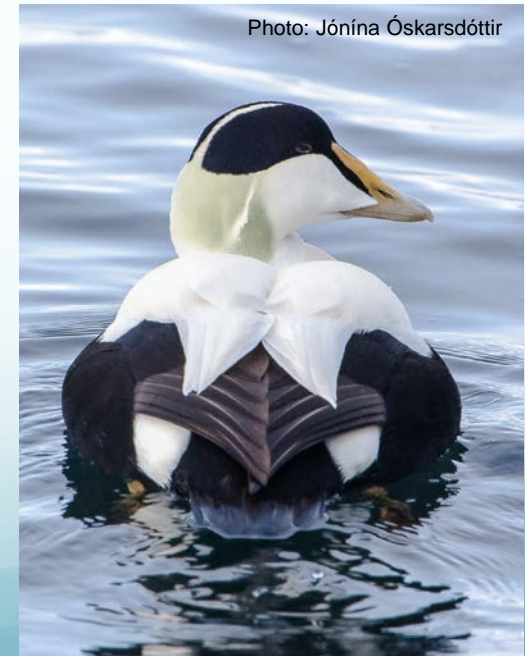
- Regional hub for waterfowl
- Wild rice, submerged aquatic vegetation





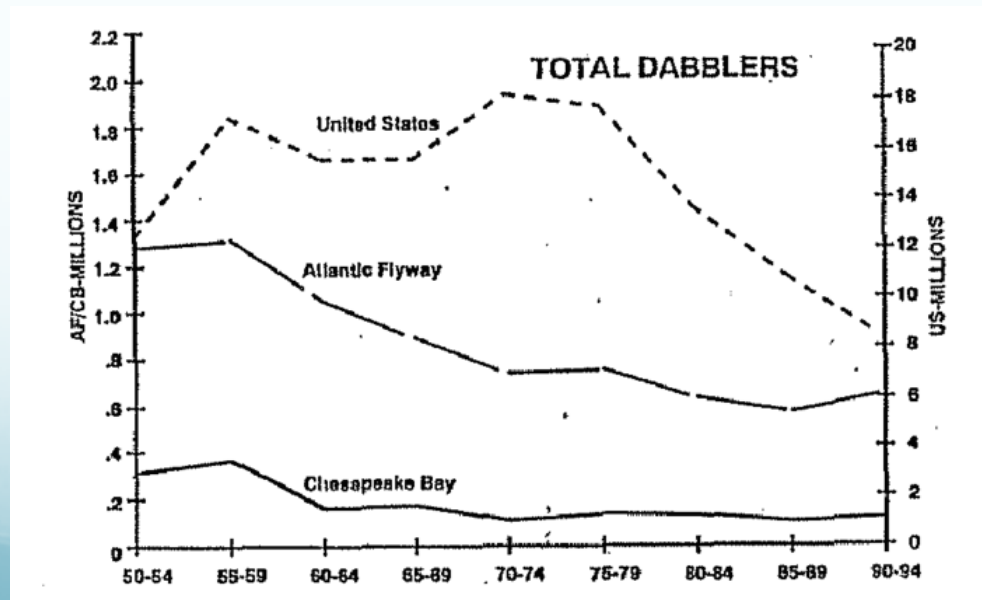
# Ecological Significance

- >40,000 birds historically
- ~4,000 currently
- American Black Duck, Common Eider



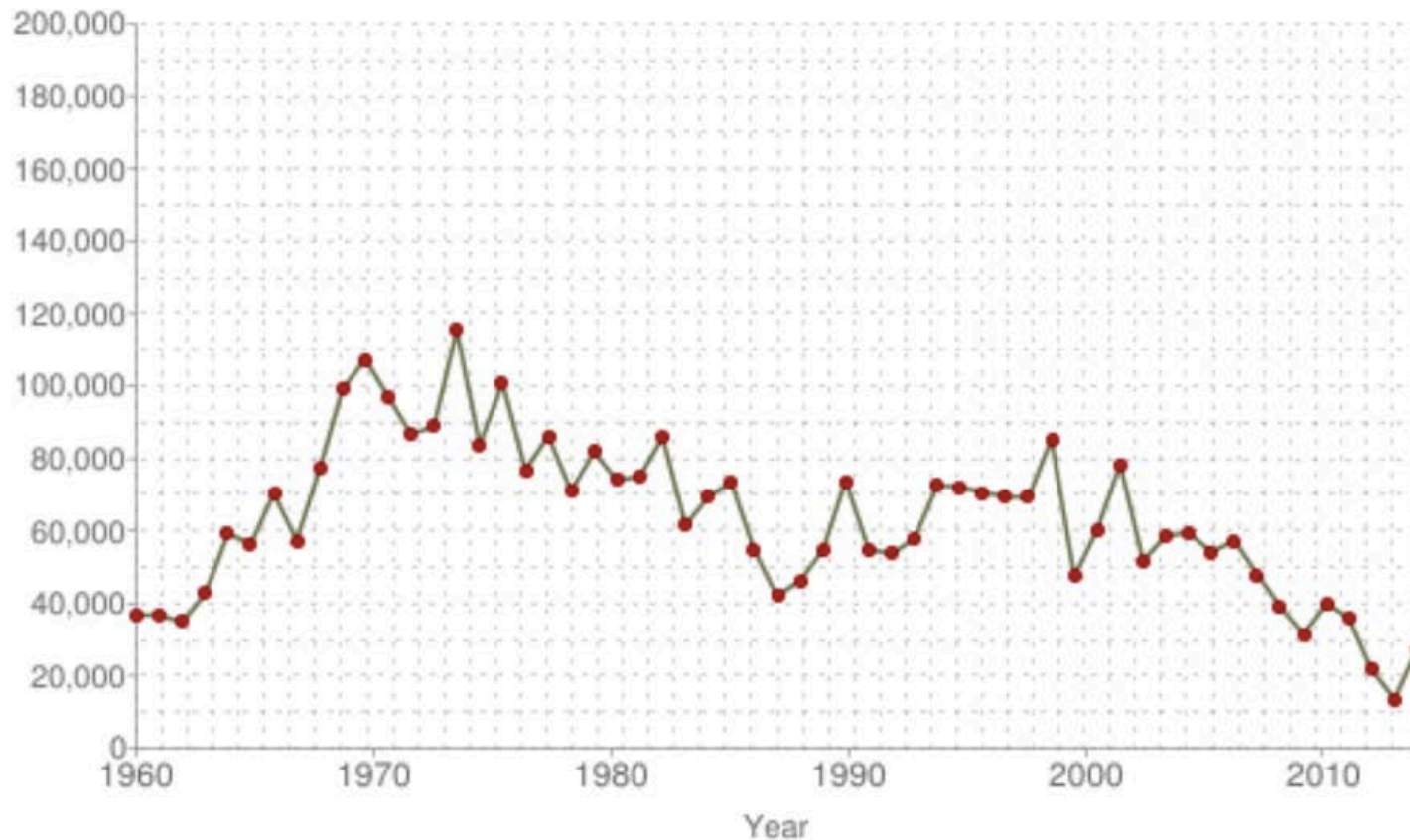
# Ecological Significance

- Atlantic flyway populations decreased
- Water quality improvements may have decreased aquatic vegetation & waterfowl food



# Ecological Significance

Total number of ducks harvested in Maine



# Ecological Significance

- Near northern limit for Saltmarsh Sparrow
- Only endemic bird species in Northeast
- Severe declines; facing extinction in decades



# Ecological Significance

- Near center of hybrid zone for Saltmarsh Sparrow & Nelson Sparrow
- High density of both species, much mixing
- May be important for genetic diversity & influential to Nelson adapting to tidal marsh

Photo: Chris Elphick



# Ecological Significance

Colonial nesting birds on islands

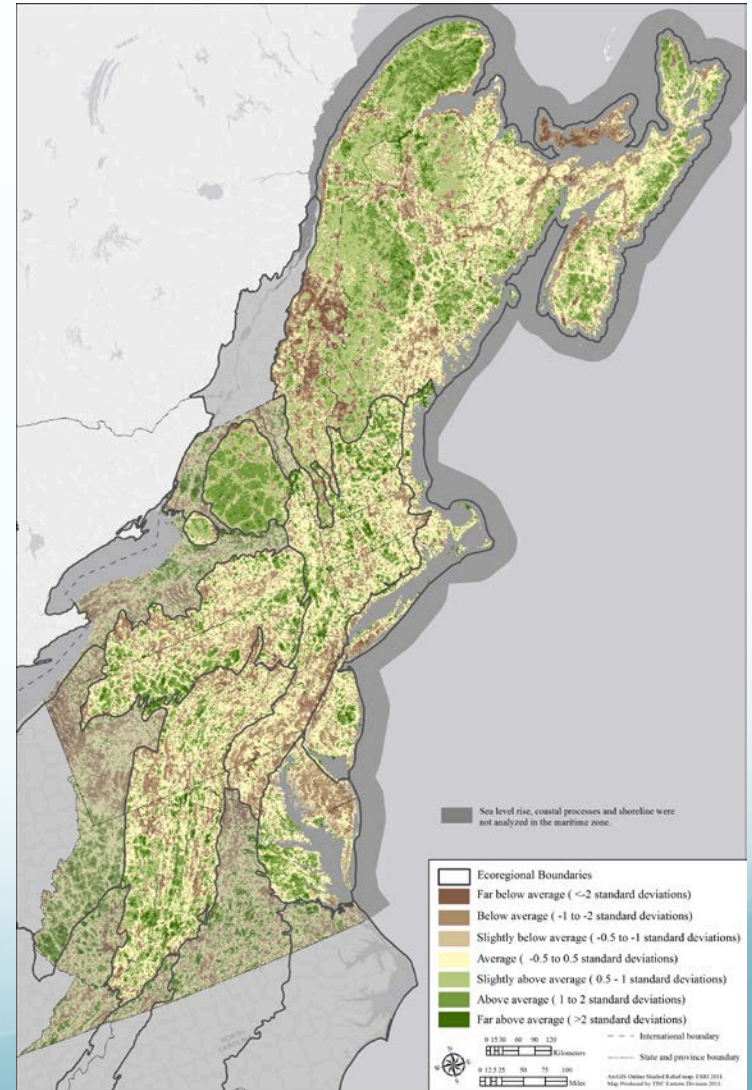
- >700 Common Terns (Some Roseate, Arctic, Least)
- Common Eider

Rare winter bird species

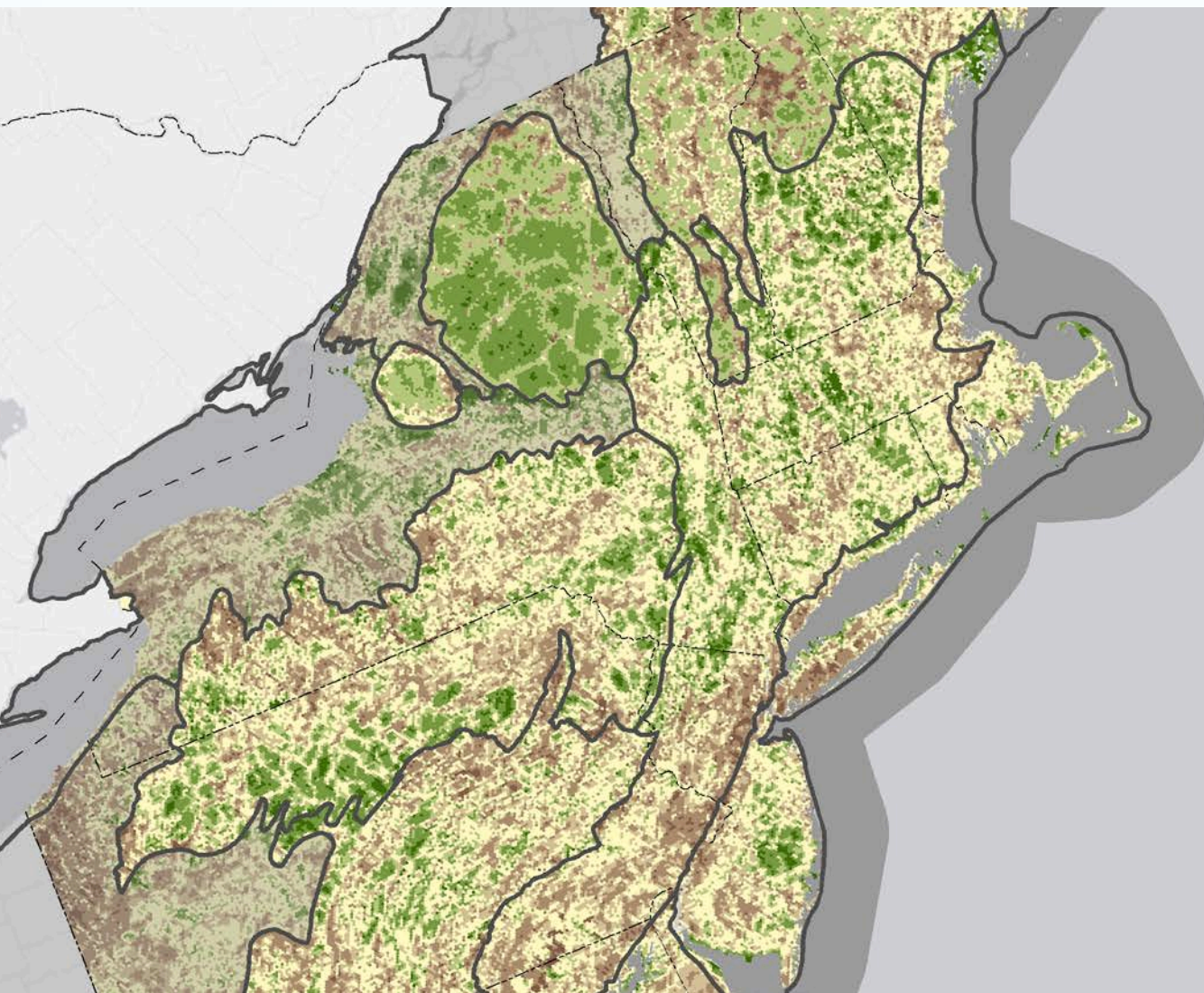
- Ipswich Sparrow
- Harlequin Duck
- Purple Sandpiper

# Ecological Significance

Area designated as “highly resilient”



**Regional Terrestrial Resilience Score**  
Stratified by Setting and Ecoregion with Regional Override





# Ecological Significance

Designated focus area:

- Beginning with Habitat
- Important Bird Area (Audubon)
- The Nature Conservancy

Focus of ongoing land protection efforts