

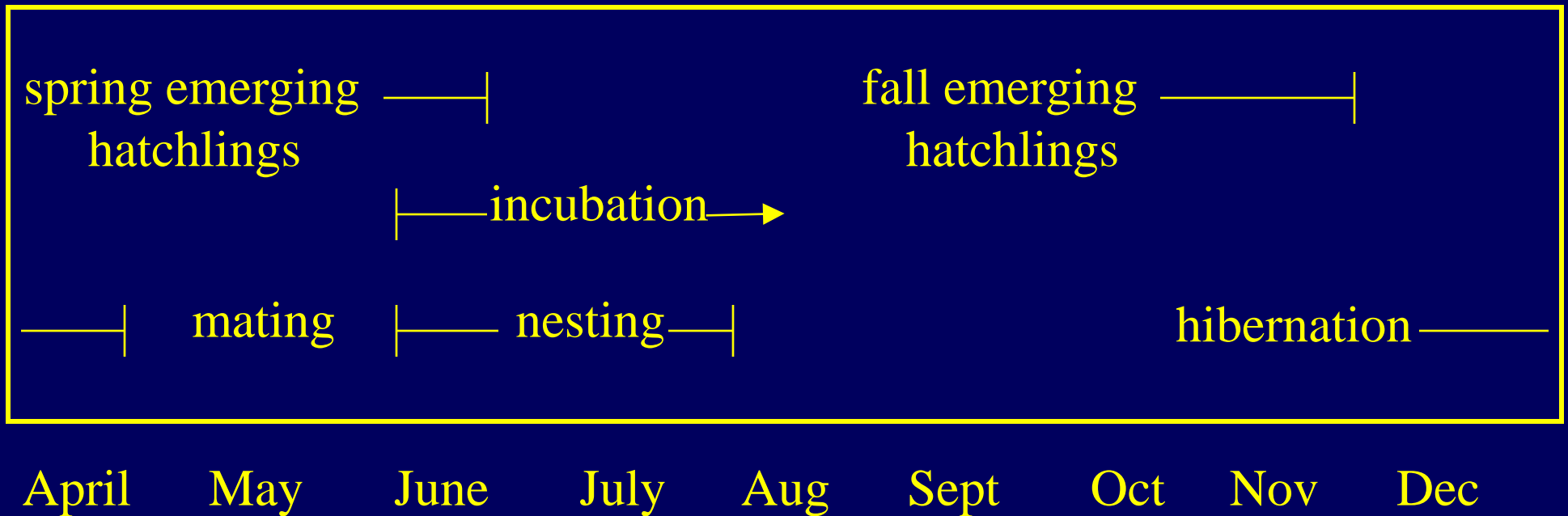
# Offshore Energy Development and diamondback terrapins



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# Annual Cycle

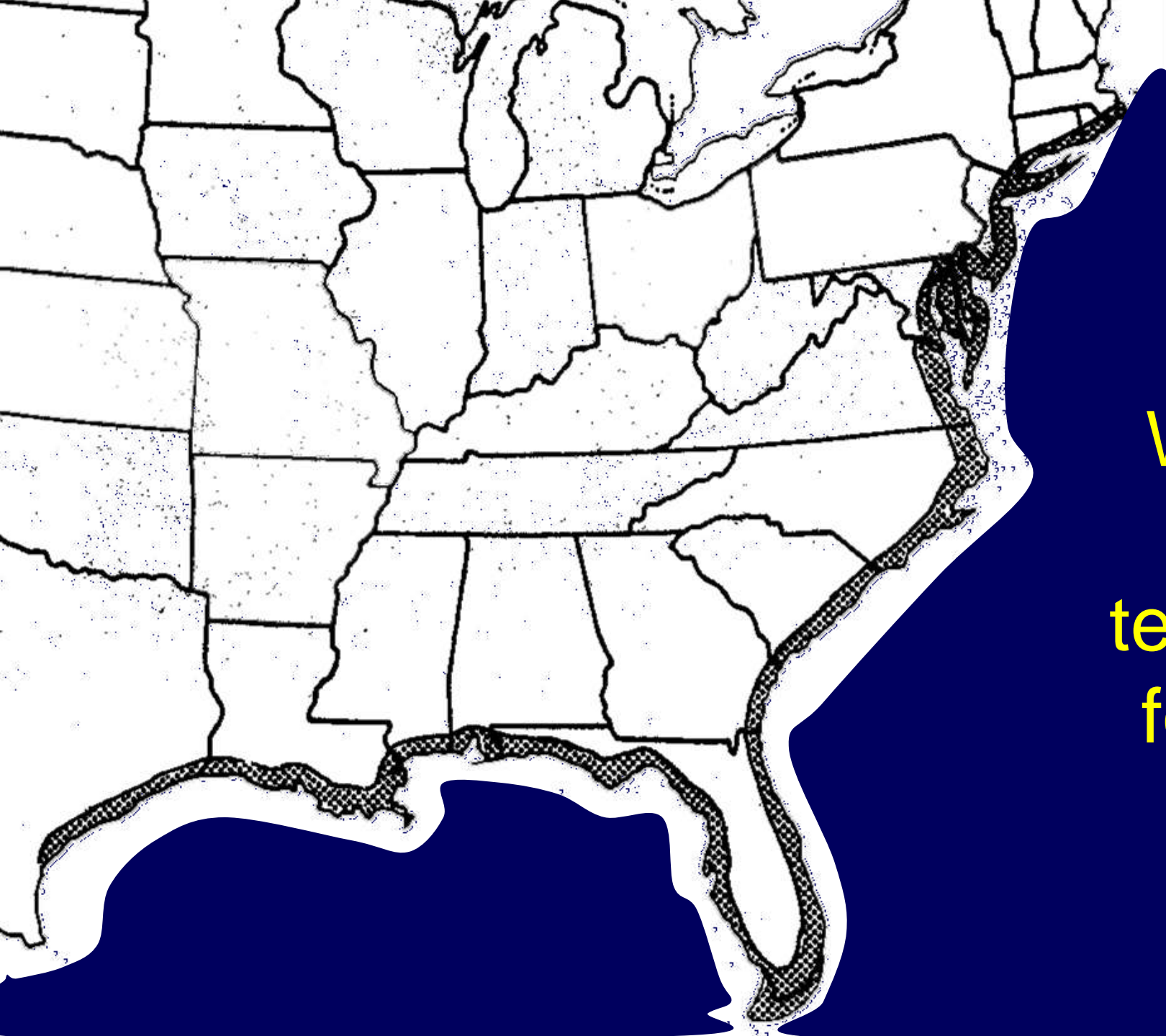


# Diamondback Terrapins

## the Basics

- Females mature at about 7-8
- Males mature at about 4
- Longevity unknown
  - mortality
  - maximum





Where  
are  
terrapins  
found?

# Where are terrapins found?

- Estuarine habitats (freshwater meets saltwater)
  - Coastal marshes
  - Bays, estuaries, coves

- *Spartina* marshes: key habitat requirement
  - Foraging/feeding
  - Hibernation
  - Hatchling development
  - Basking





# Long history of use as food

- Gourmet food item through 1920's
- Nearly extinct by 1930s - "turtle soup"
- Now protected by New York state law
  - possession out of season illegal
  - must have state license to catch or possess
  - cannot possess or sell turtles less than four inches or greater than seven inches carapace length
- Small but growing illegal market

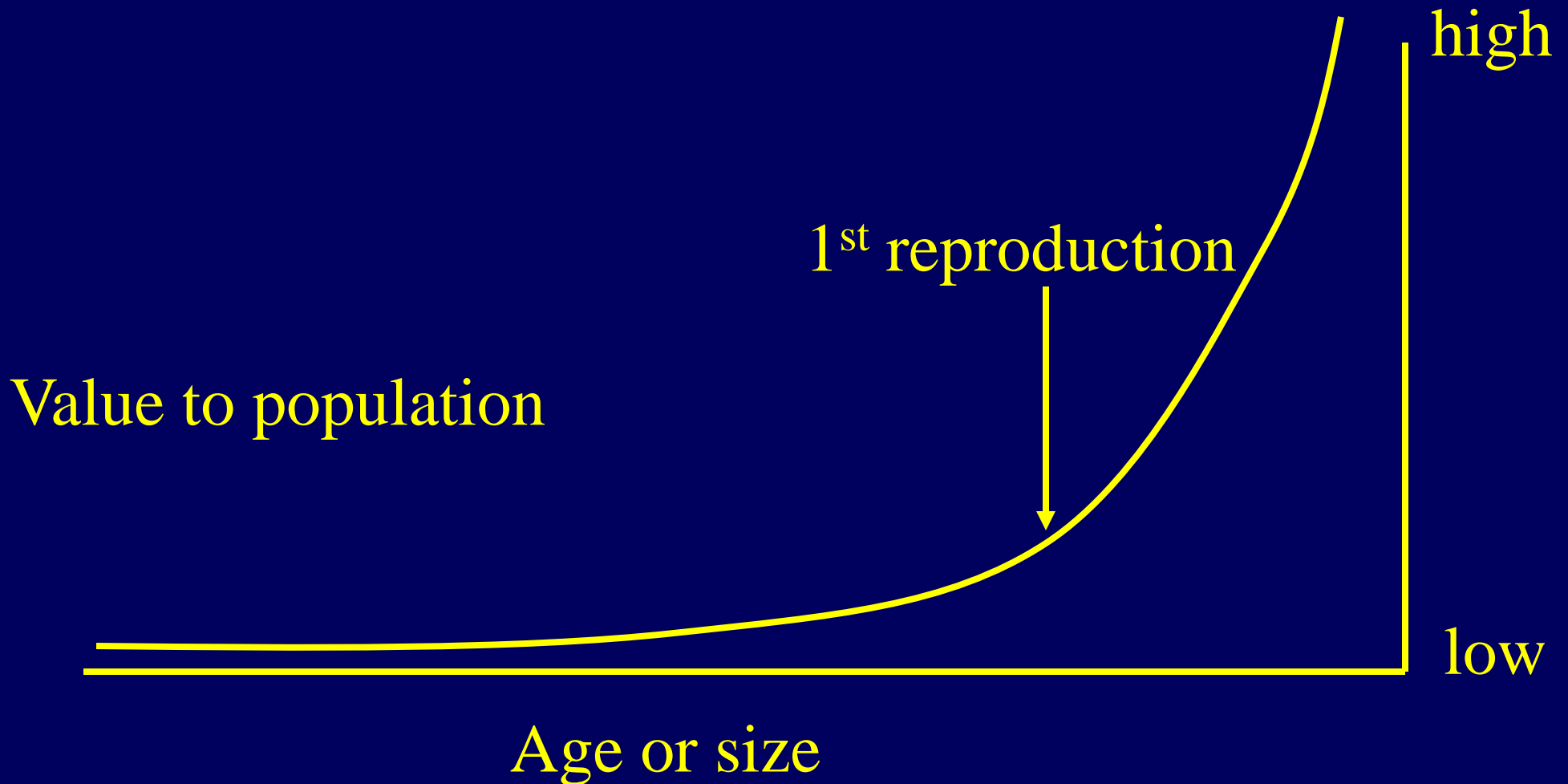
# Current threats

- Habitat destruction
  - *Spartina* marsh loss
  - Nesting habitat loss
- Boat damage
- Crab traps
- Nest predators
- Food market



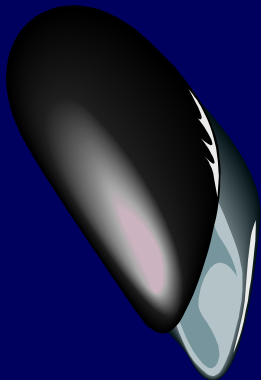


# Population sensitivity analysis

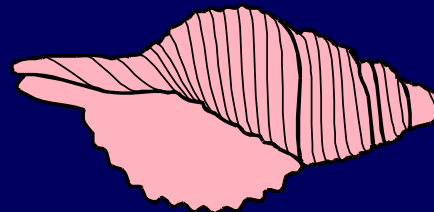


# What do Terrapins Eat?

South Carolina only:



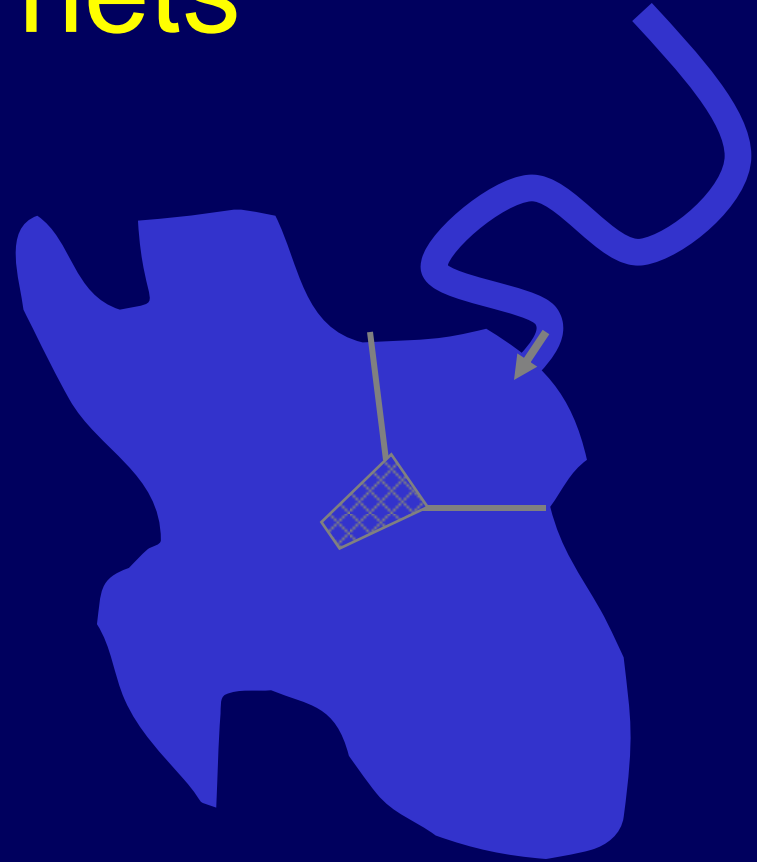
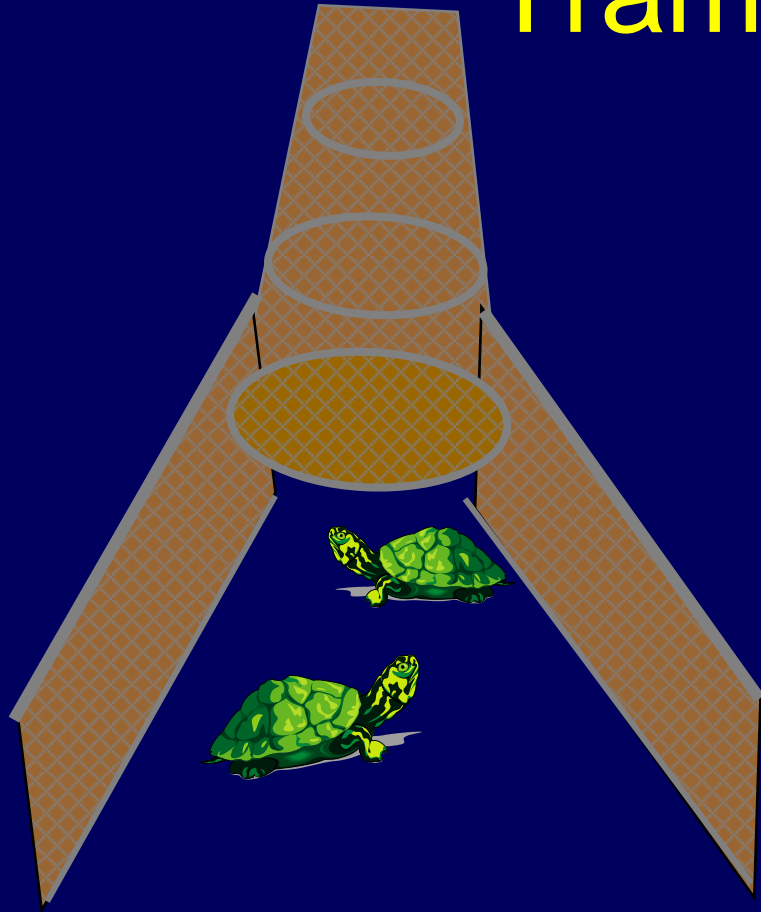
- Crustaceans
  - Crabs
  - Shrimp
- Mollusks
  - Snails
  - Clams
  - Mussels



Measuring impacts requires  
population estimates



# Trammel nets



# Detecting Trends

Hard to trap in large numbers  
+  
Hard to measure over large areas = few reliable estimates

# Major threats from offshore development

- Impact on movements between marshes
- Impacts on marshes themselves
- Increases in pollution

# Safety of movements between marshes



# Damage to marshes themselves



# Increases in water pollutants

- Organochlorines: PCB's, DDT, DDE, dieldrin
- Metals: mercury, cadmium, lead
- Petroleum products

Potential effects almost entirely unknown

Bottom line—we don't know much

