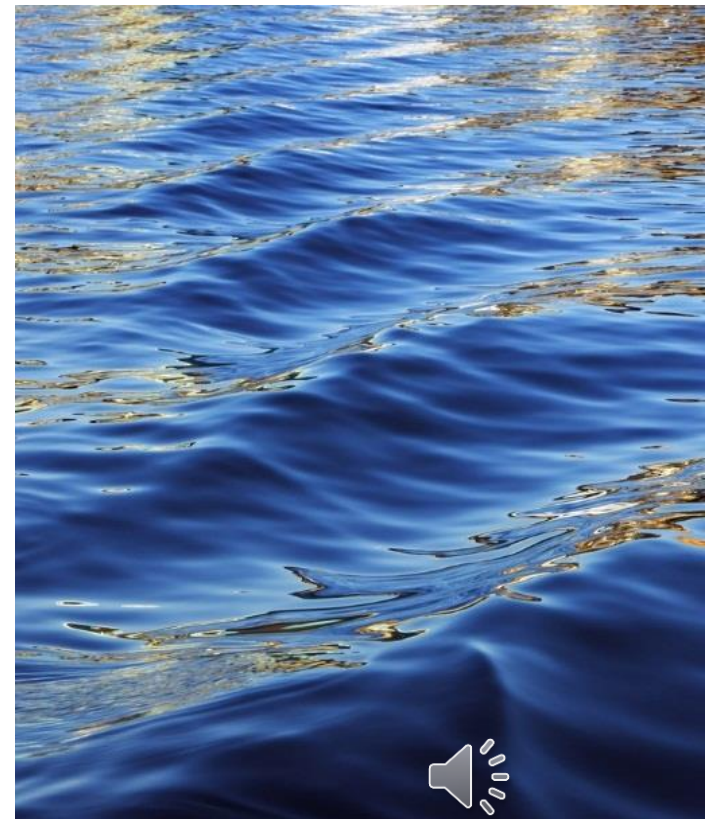




Osprey's of the Chesapeake Bay: Sentinels of the Estuary

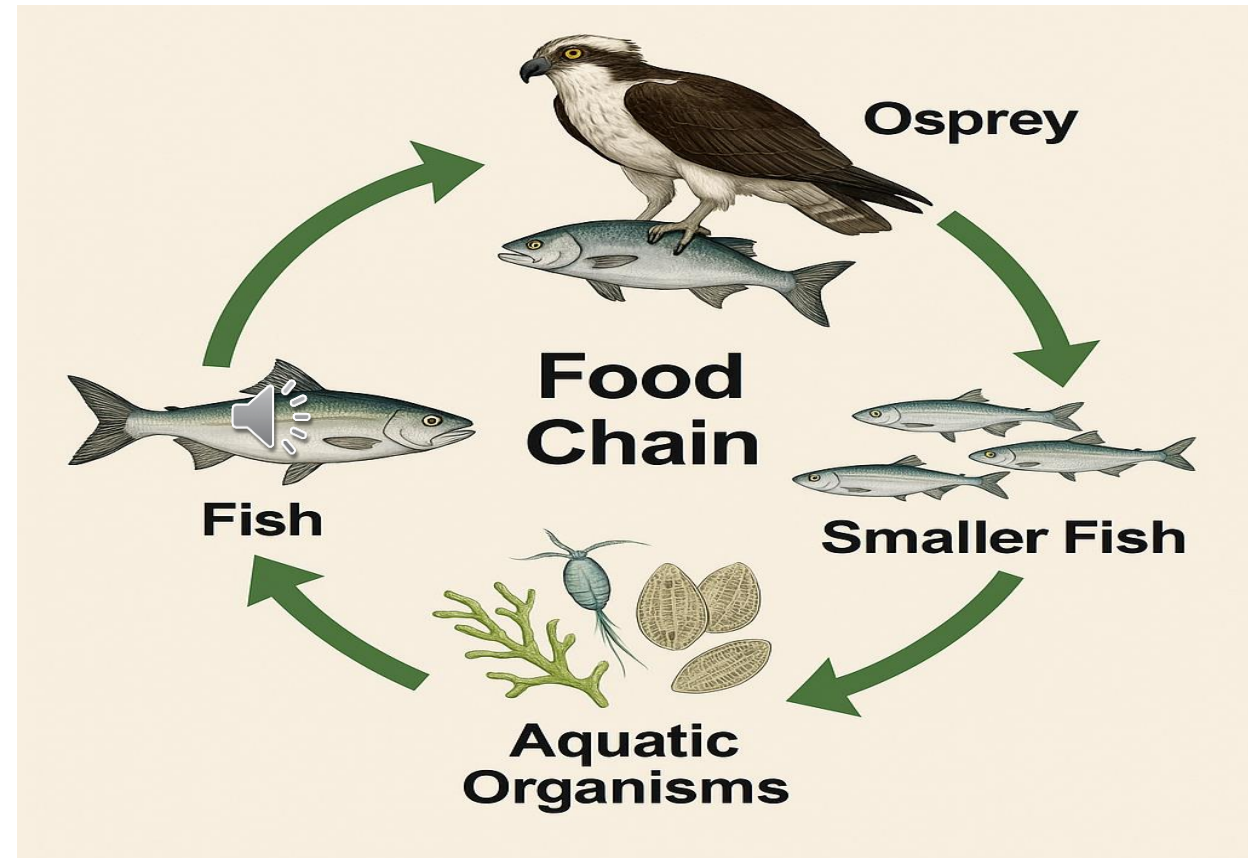
John McGuire
Env 106
07/28/2025



Ospreys are birds of prey native to the Chesapeake Bay.

Ecological role

- The mostly fish diet the Osprey's utilize make them key indicator species of aquatic ecosystem health.





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Ospreys in the Chesapeake Bay

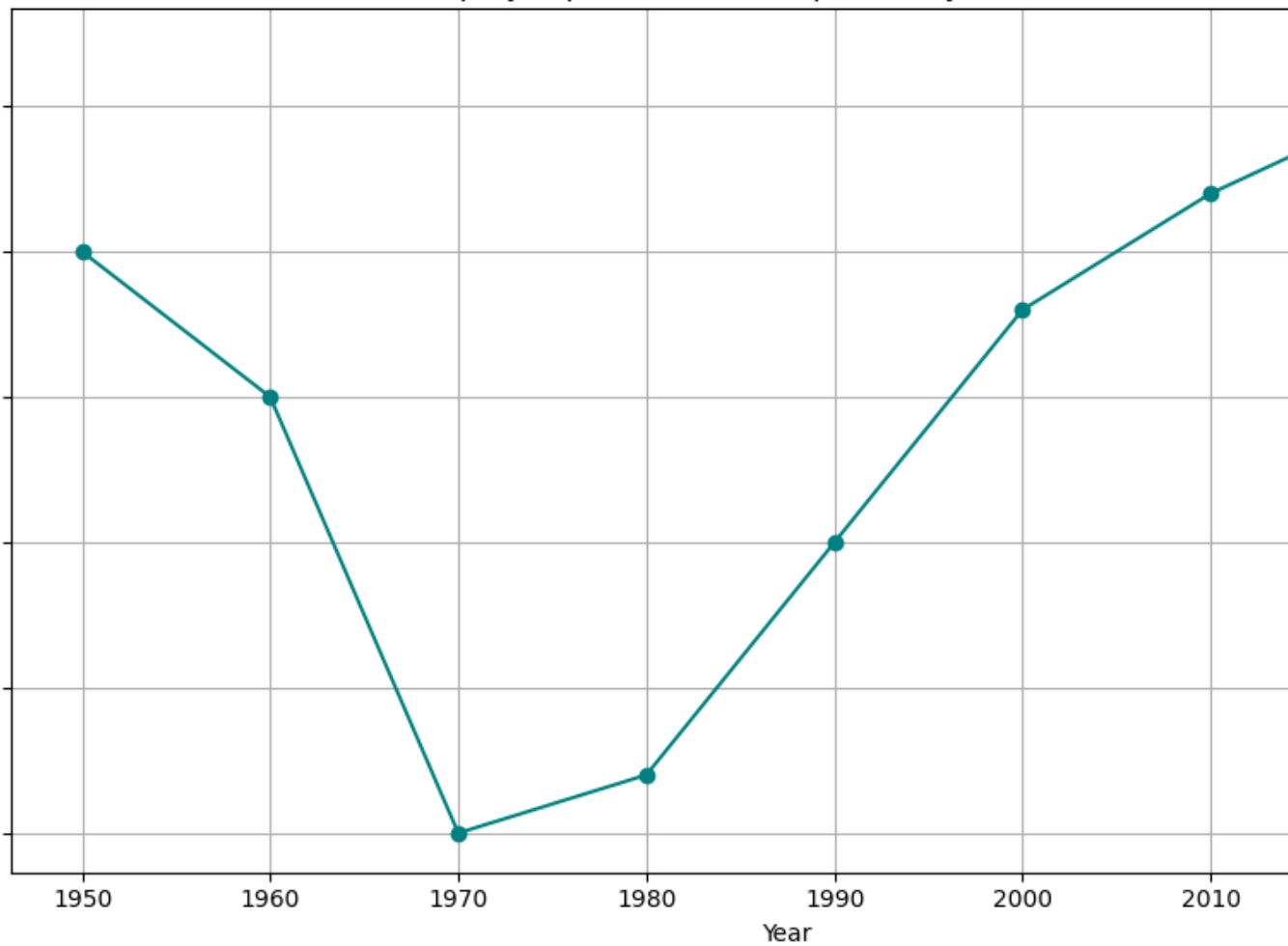
Regional Significance

The Chesapeake Bay hosts the largest concentration of nesting ospreys in the world, especially during the spring and summer breeding season.

"Over 3500 breeding pairs return here each year." (Chesapeake Bay Program, n.d.)



Osprey Population in Chesapeake Bay (1950-2025)



Here's a line graph showing the **estimated osprey population trend in the Chesapeake Bay from 1950 to 2025**:

Key Insights:

1950-1970: Sharp decline due to DDT contamination.

1980-2000: Gradual recovery begins after DDT ban and conservation efforts.

2000-2025: Continued growth, reaching over 3,700 breeding pairs.



Recovery



Nesting platform in wild

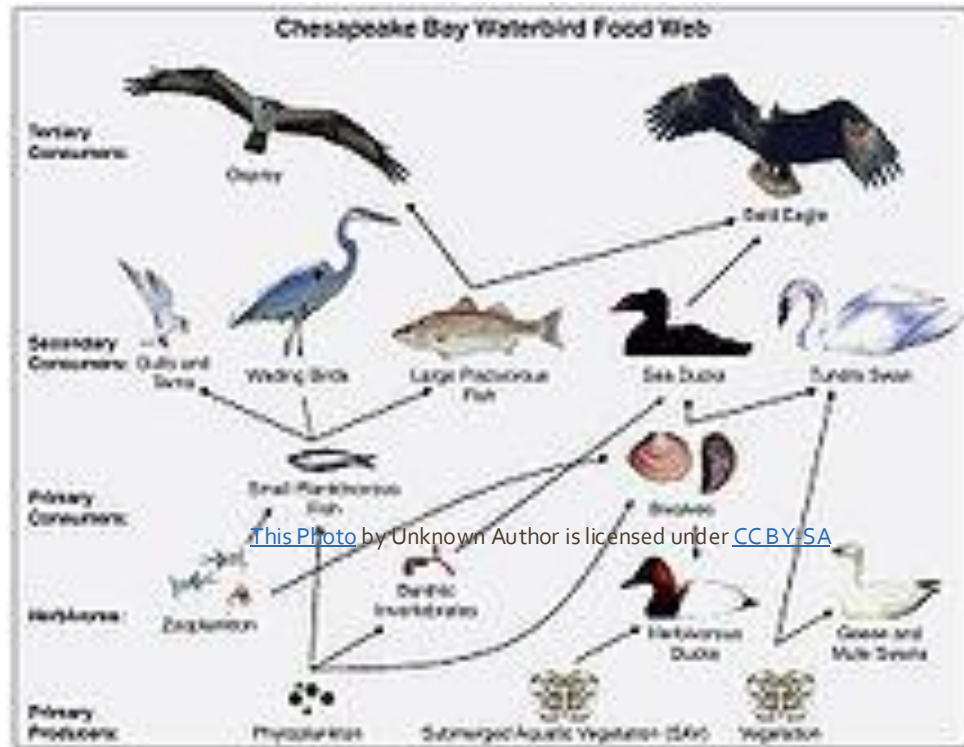


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Water quality and plastic threats

- Food Chain
- Plastic threats
- Water quality





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Climate Pressure

Sea level rise, Storm damage, Habitat loss



Future Science

Citizen science



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Forecasting tools

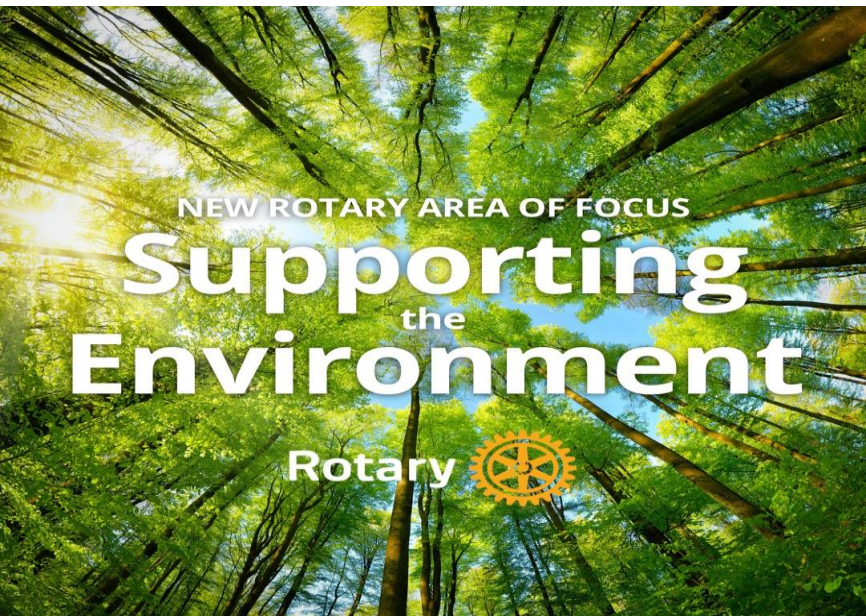


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Protect
Waterways



Protect, Support
and
Educate

Need and Importance of Environmental Education



References:

- Chesapeake Bay Program (n.d.)
- Cornell Lab (n.d.)
- Large Shifts in Commercial Landings of Estuarine and Bay Bivalve Mollusks in Northeastern United States after 1980 with Assessment of Causes - Scientific Figure on ResearchGate. Available from: https://www.researchgate.net/figure/Landings-of-oysters-in-Chesapeake-Bay-1950-2010-Source-US-Fisheries-Statistics-and_fig3_326323943 [accessed 3 Aug 2025]

