Impacts on Salmonid Smolts of Avian Predation in the Columbia River Estuary

a study conducted by

USGS – Oregon Cooperative Fish & Wildlife Research Unit

Real Time Research

Oregon State University

Acknowledgments

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Scott Sebring, Brad Ryan, Bob Emmett)

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Piscivorous Waterbird Colony Locations

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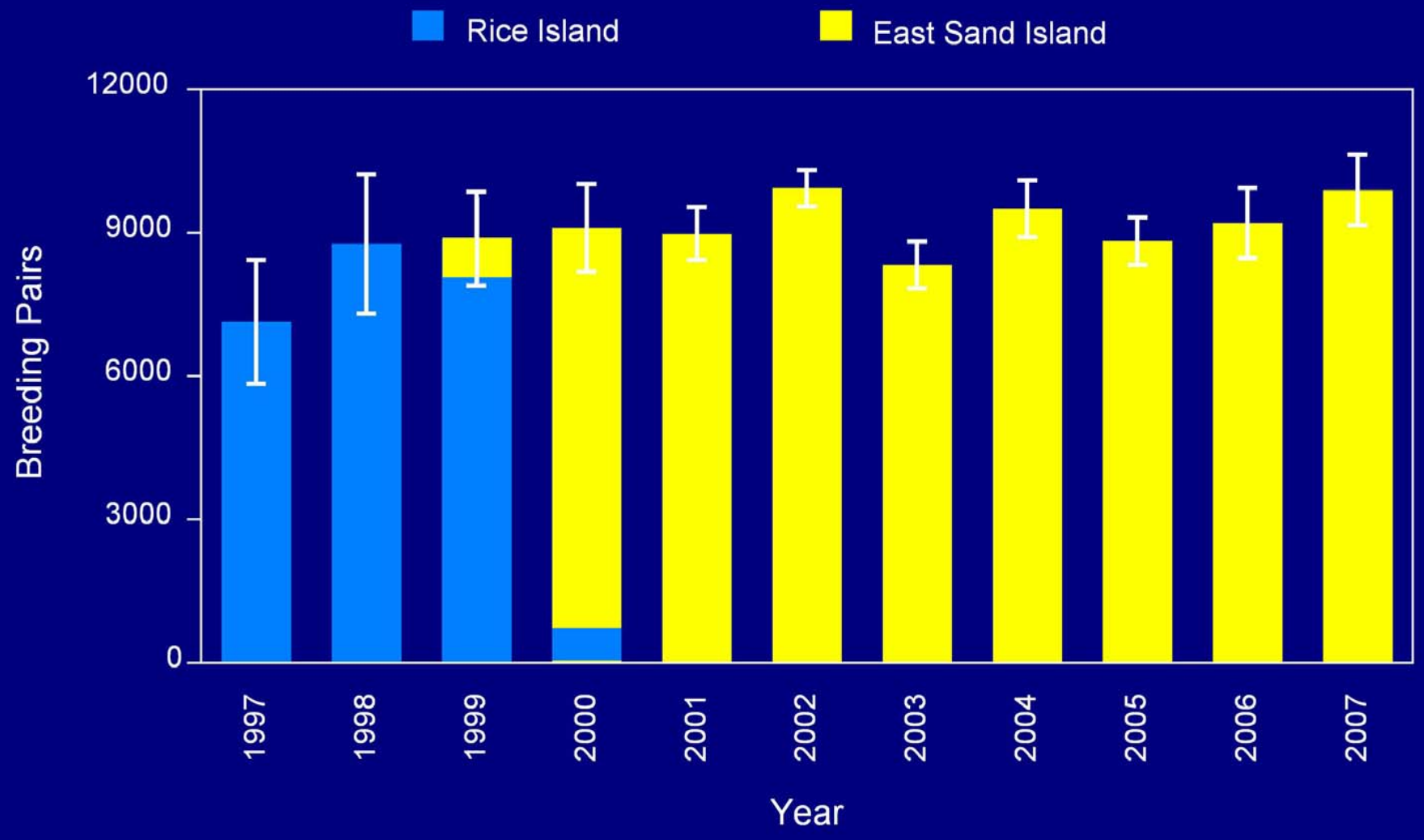
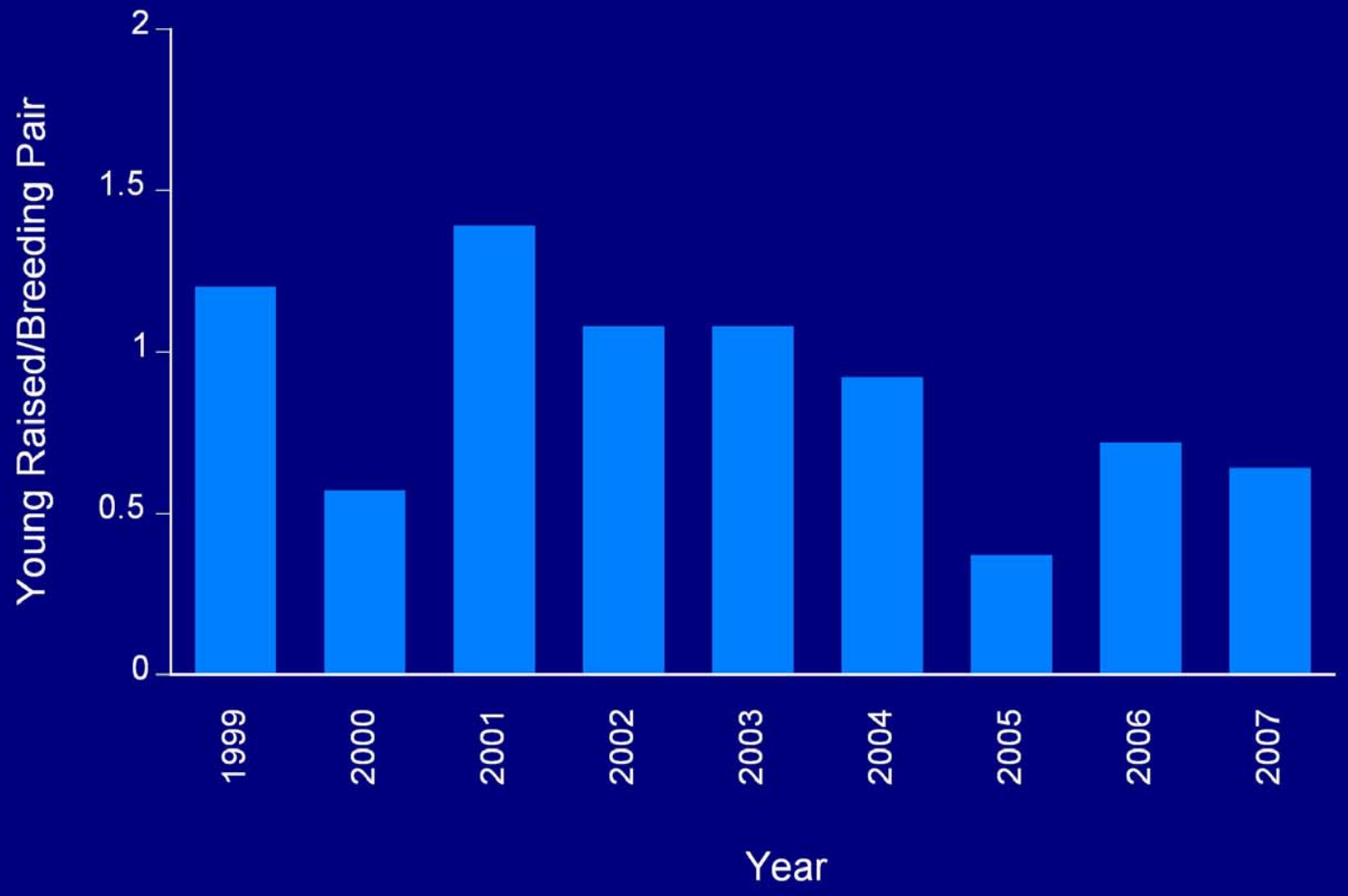
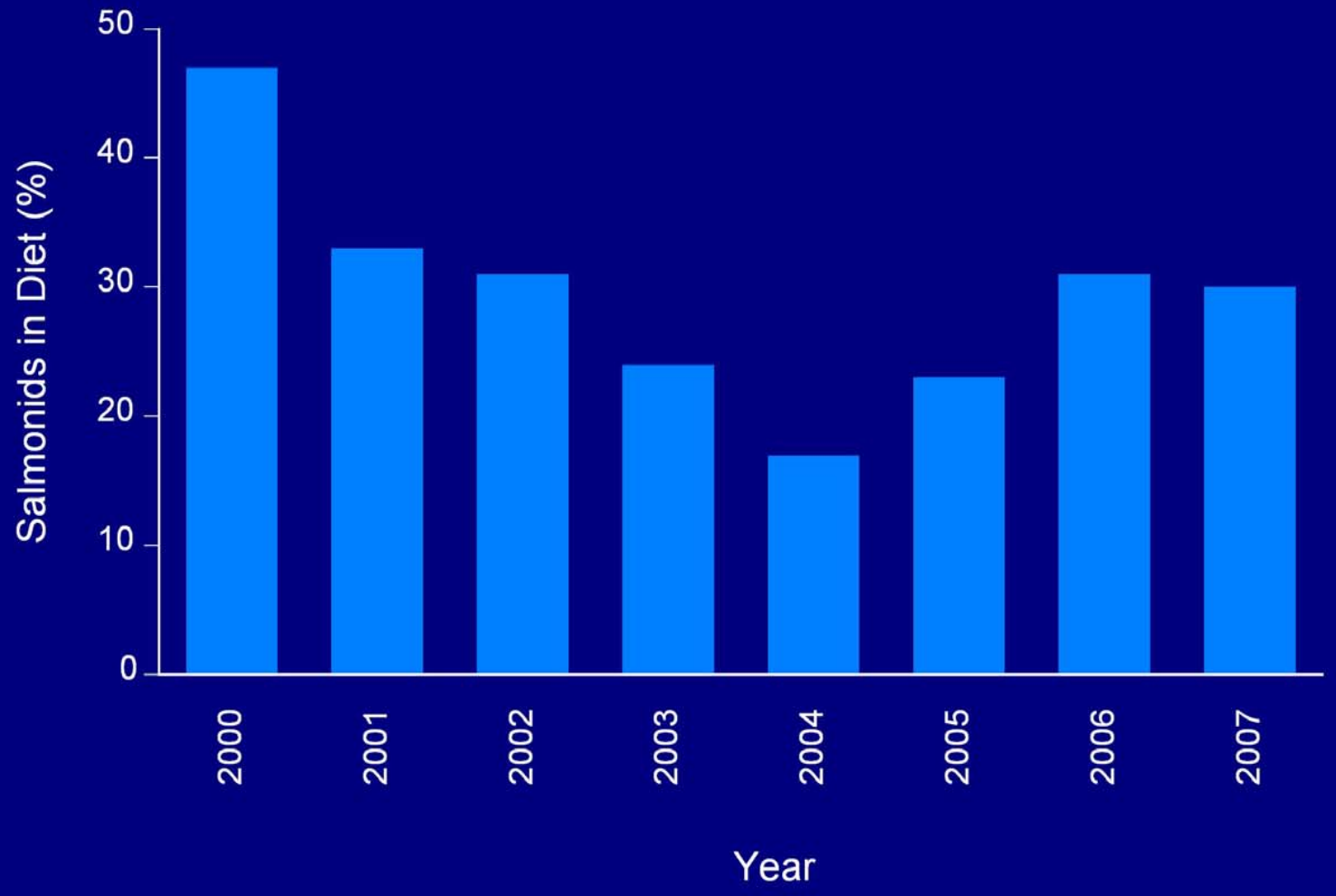
Caspian Tern Colony Size in the Columbia River Estuary



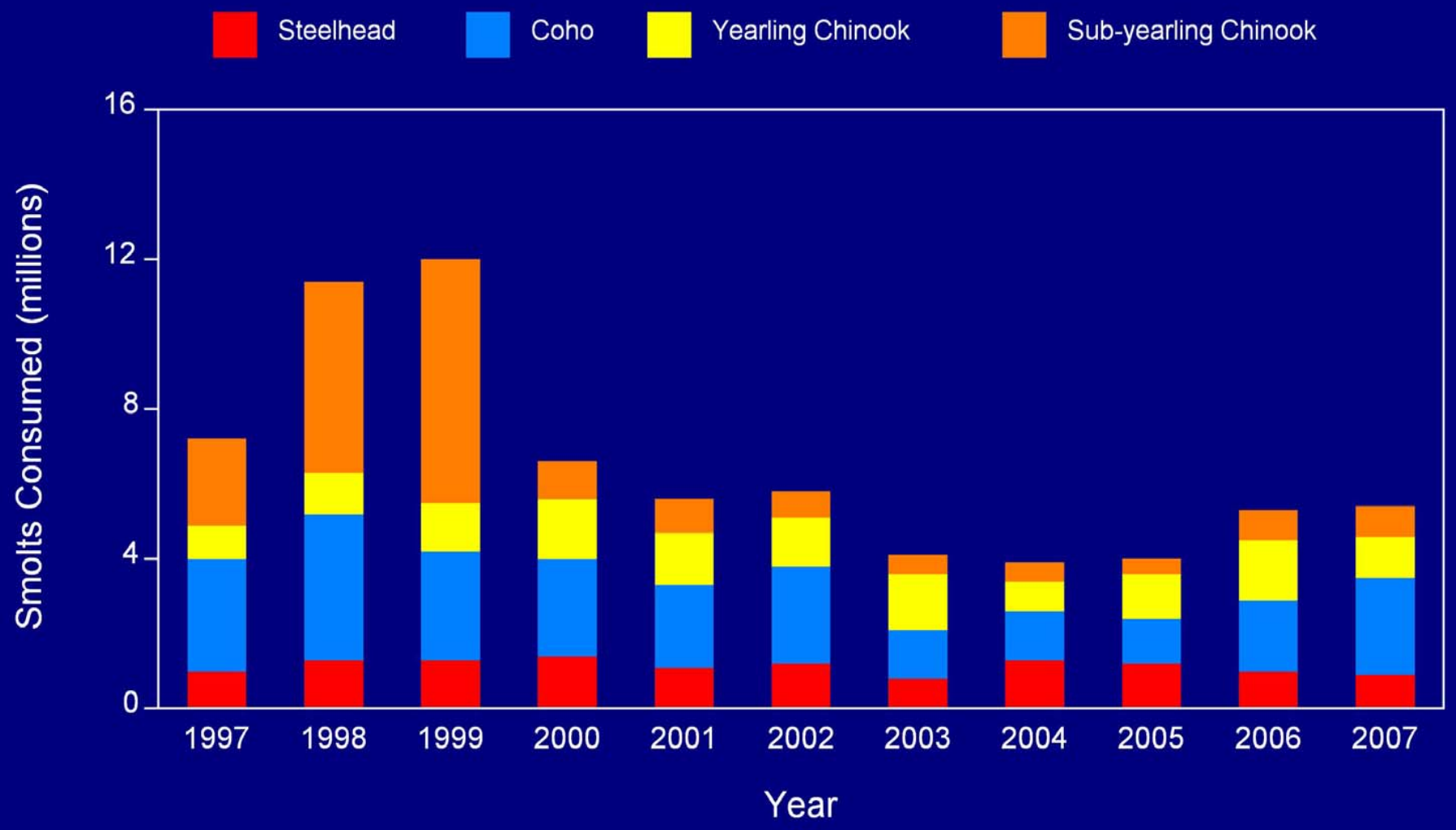
Caspian Tern Productivity on East Sand Island



Juvenile Salmonids in the Diet of Caspian Terns Nesting on East Sand Island



Salmonid Consumption by Caspian Terns in the Columbia River Estuary



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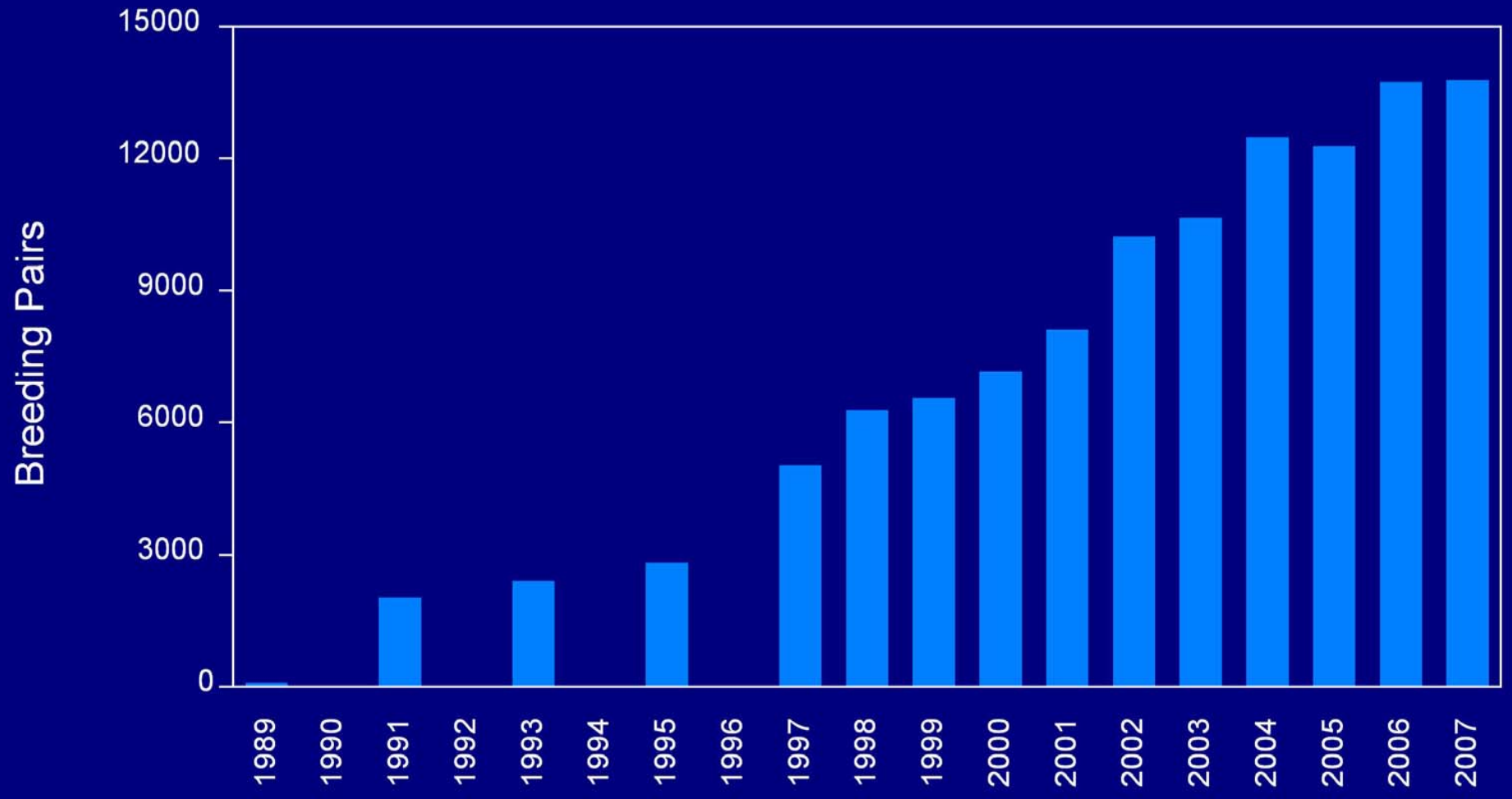
Double-Crested Cormorant Colony Size on East Sand Island



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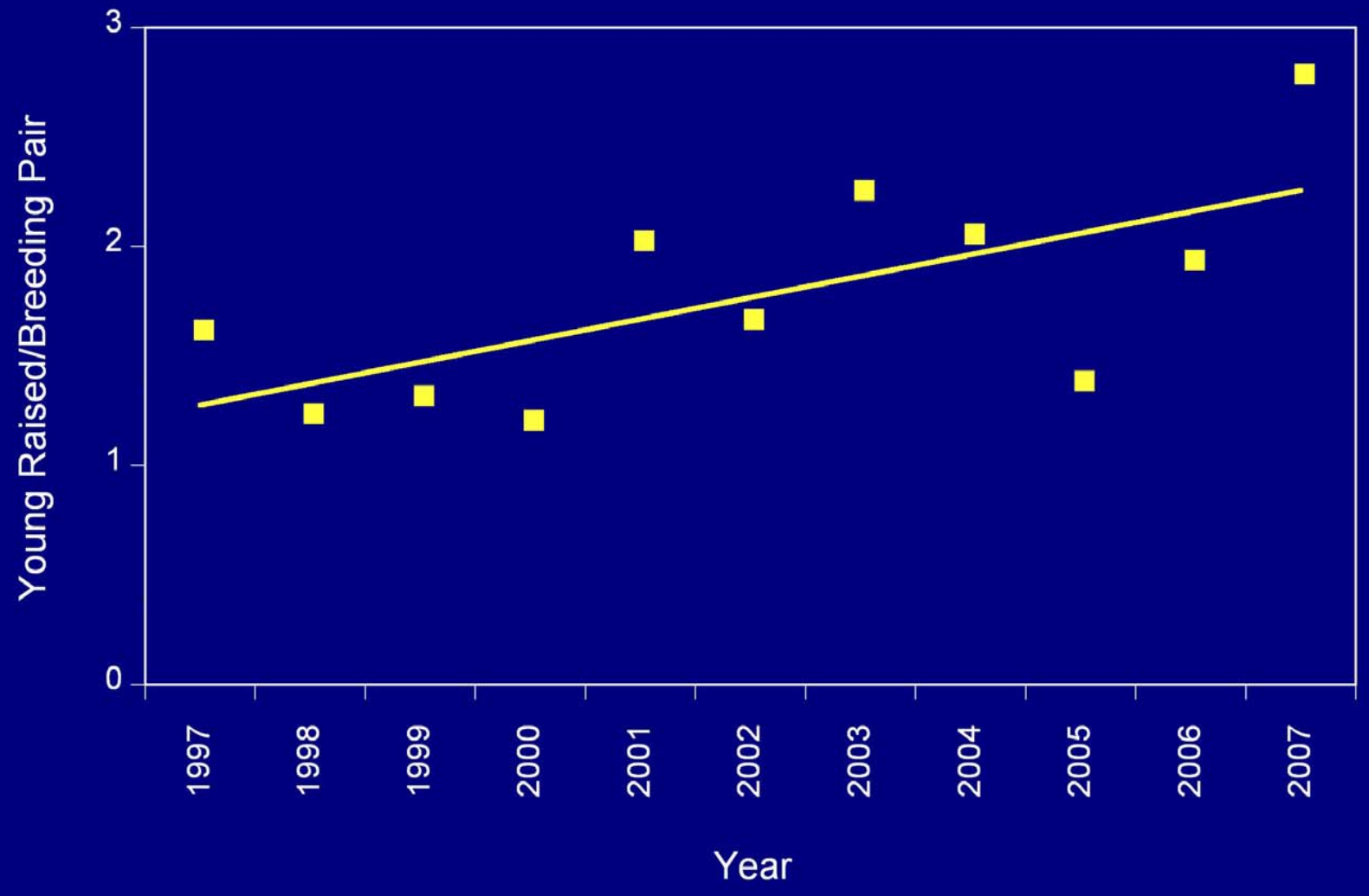
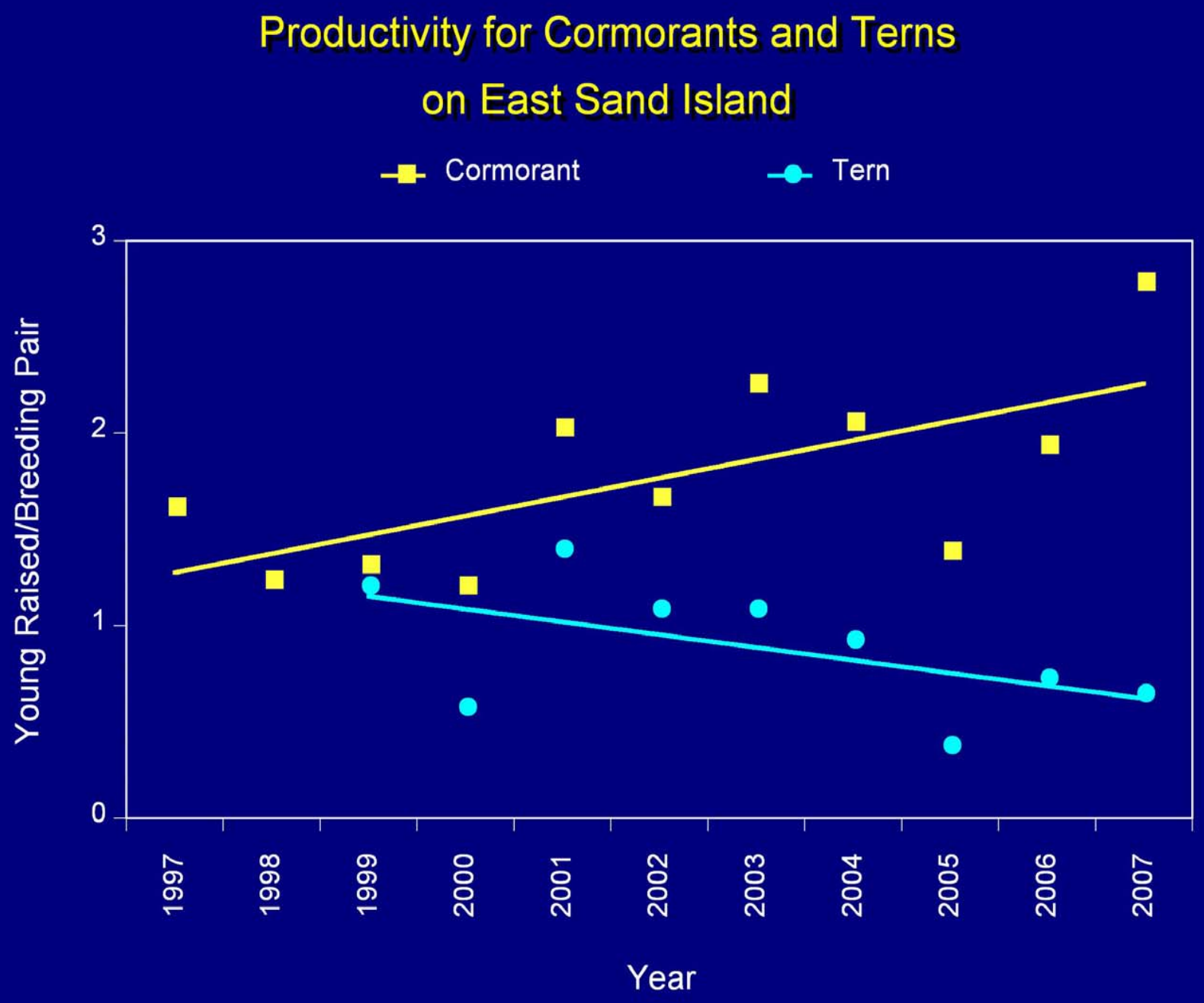
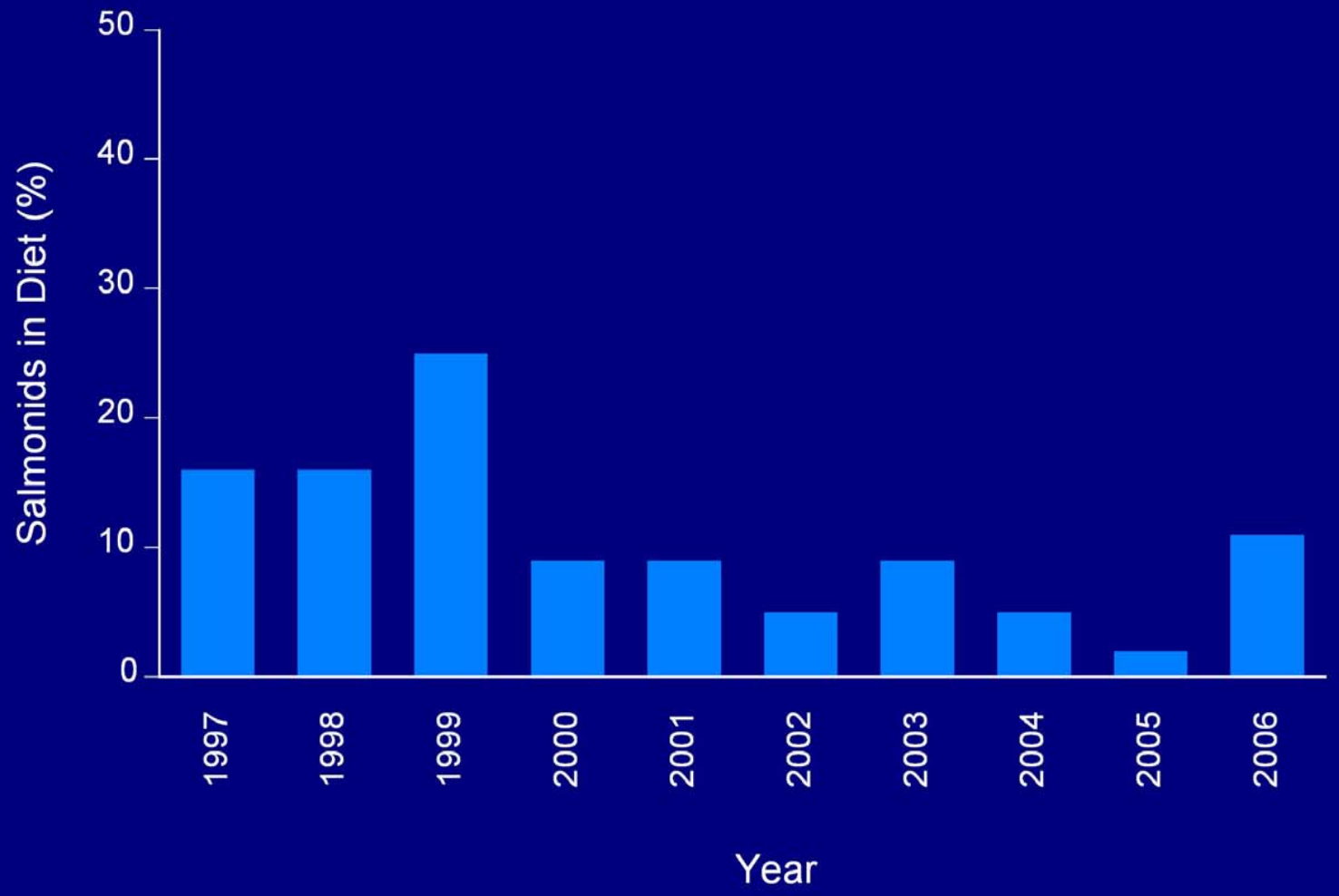
Double-crested Cormorant Productivity on East Sand Island

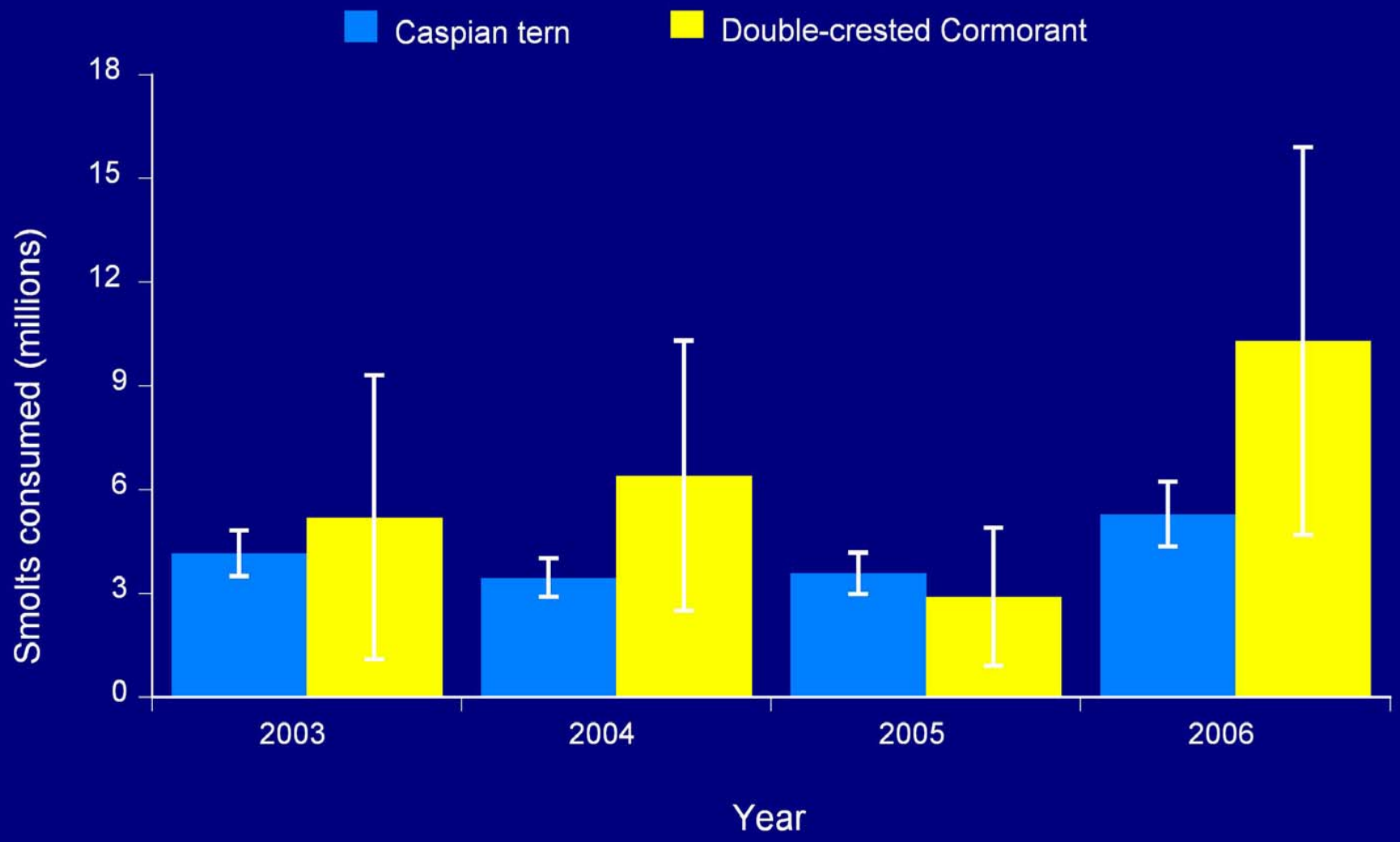



Productivity for Cormorants and Terns
on East Sand Island
Cormorant
Tern
Young Raised/Breeding Pair
3
2
1
0
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
Year

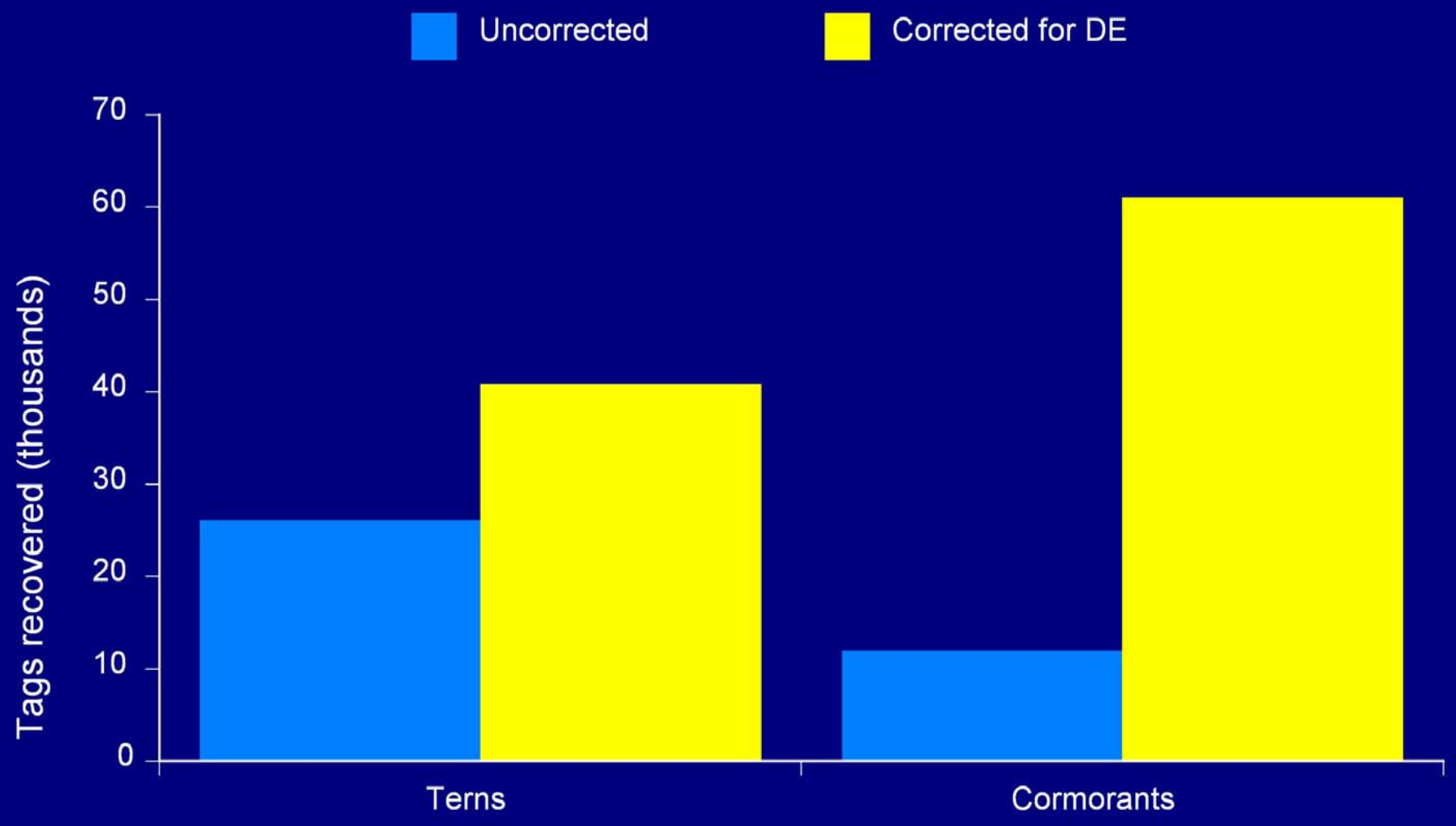
Juvenile Salmonids in the Diet of Double-crested Cormorants Nesting on East Sand Island



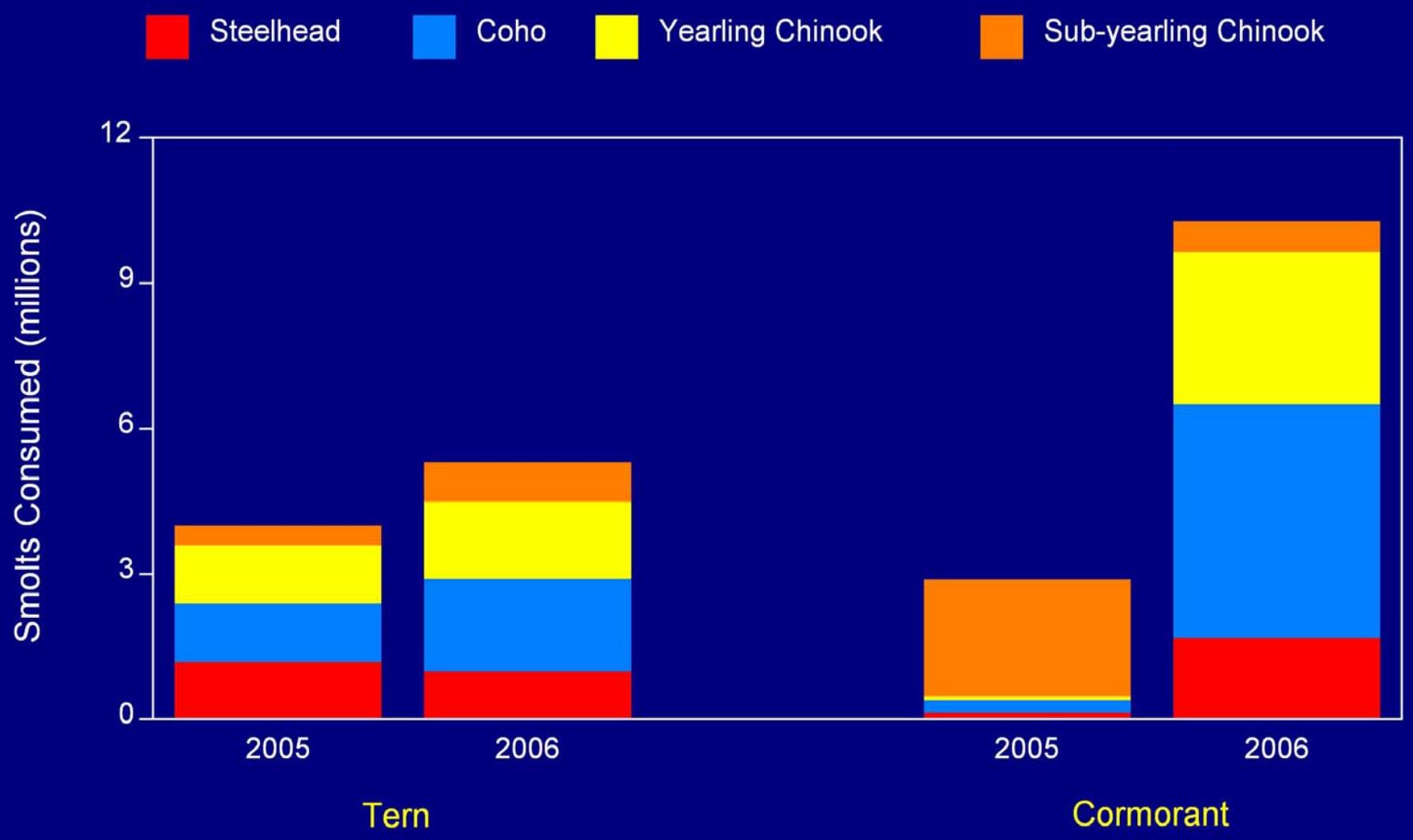
Salmonid Consumption by Terns and Cormorants on East Sand Island



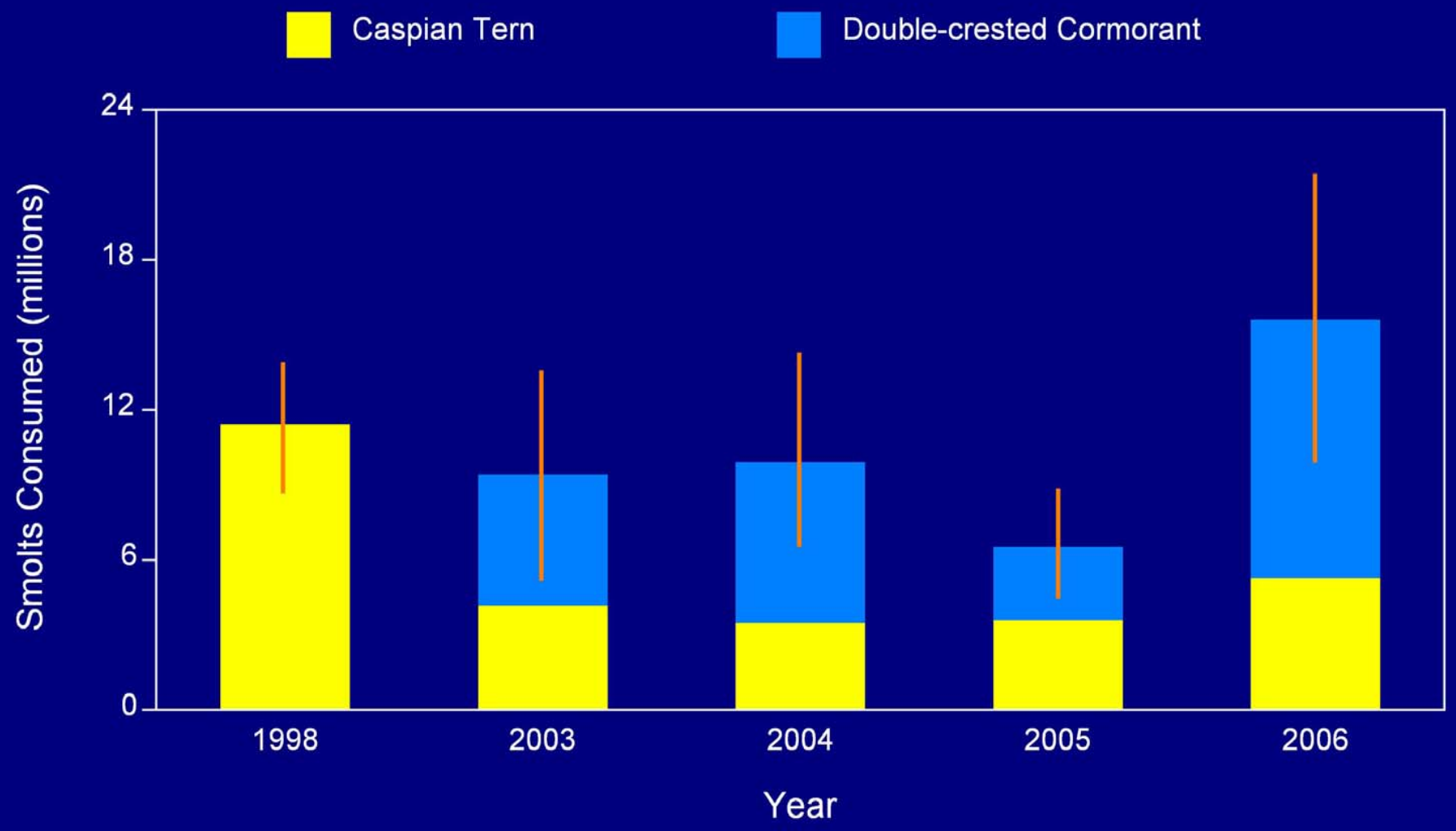
Smolt PIT Tags Recovered on the East Sand Island Tern and Cormorant Colonies, 2006



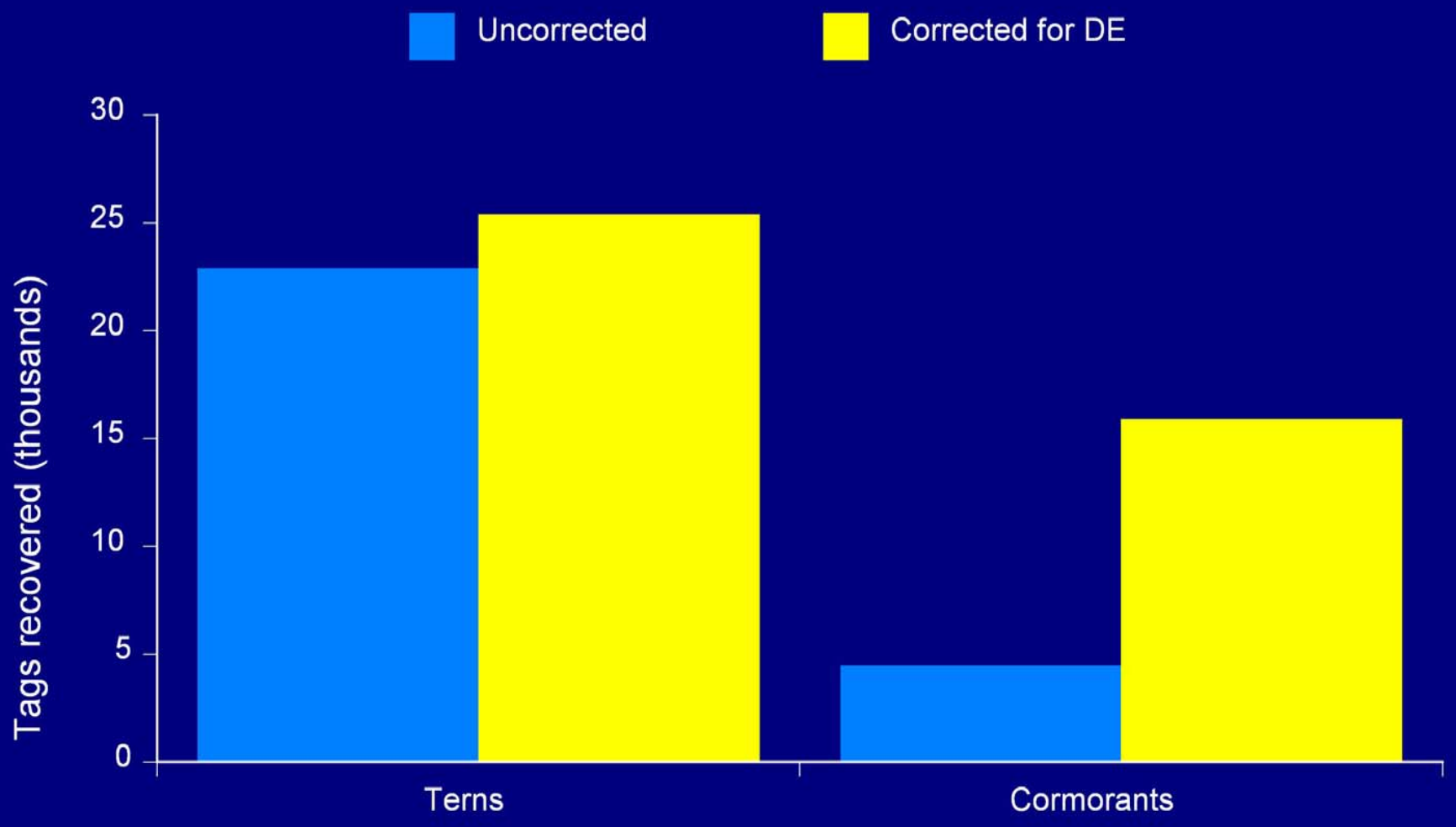
Salmonid Consumption by Terns and Cormorants on East Sand Island in 2005 - 2006



Total Smolt Consumption by Terns and Cormorants Nesting in the Columbia River Estuary



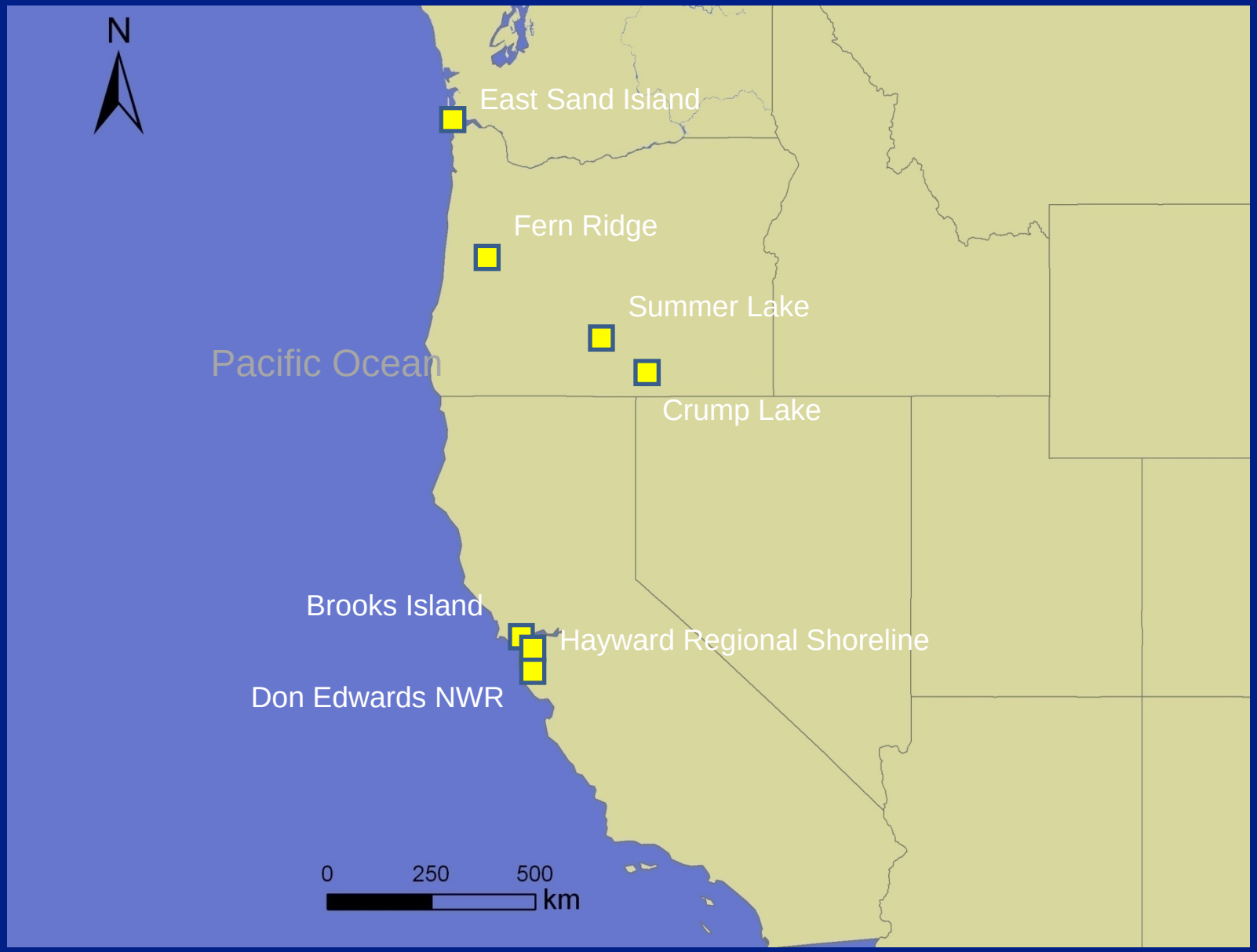
Smolt PIT Tags Recovered on the East Sand Island Tern and Cormorant Colonies, 2007



Social Attraction Experiment

- Decoys
- Audio Playback System
- Modified Nesting Substrate

Alternate Caspian Tern Sites Specified in Management Plan



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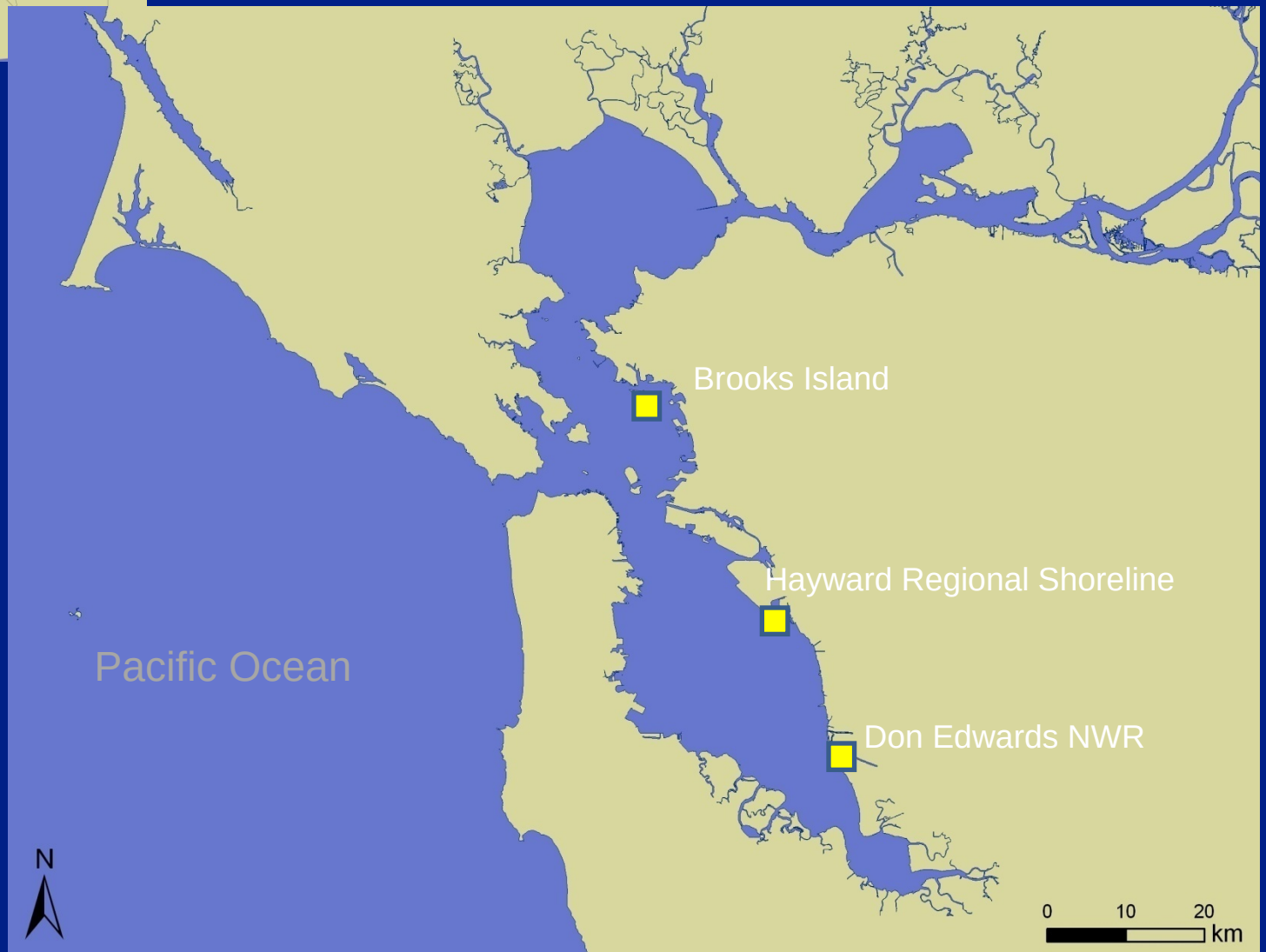

Questions?