

Do New England Closed Fishing Areas Qualify as Marine Protected Areas?



Courtesy Jim Toomey

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Overview

- Introduction to closed fishing areas in New England
- Introduction to marine protected areas
- The rise of MPA research
- Confusion in the literature
- Possible sources of confusion
- Recording history and answering the question
- Justification for the research
- Answering the other question: How awesome is Ocean Exploration and Research?



Introduction to closed fishing areas in New England



1950: International Commission for the Northwest Atlantic Fisheries formalizes extensive closures

1977: New England Fishery Management Council continues closures in time and space

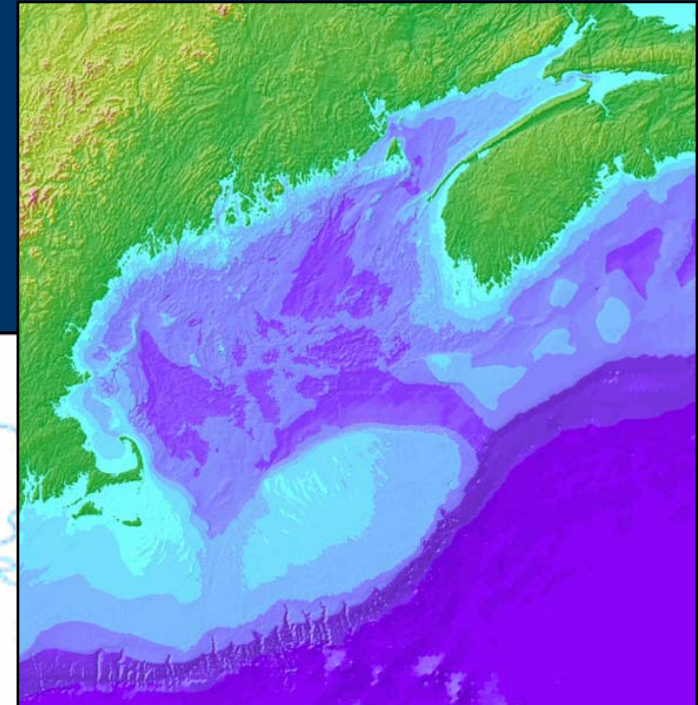
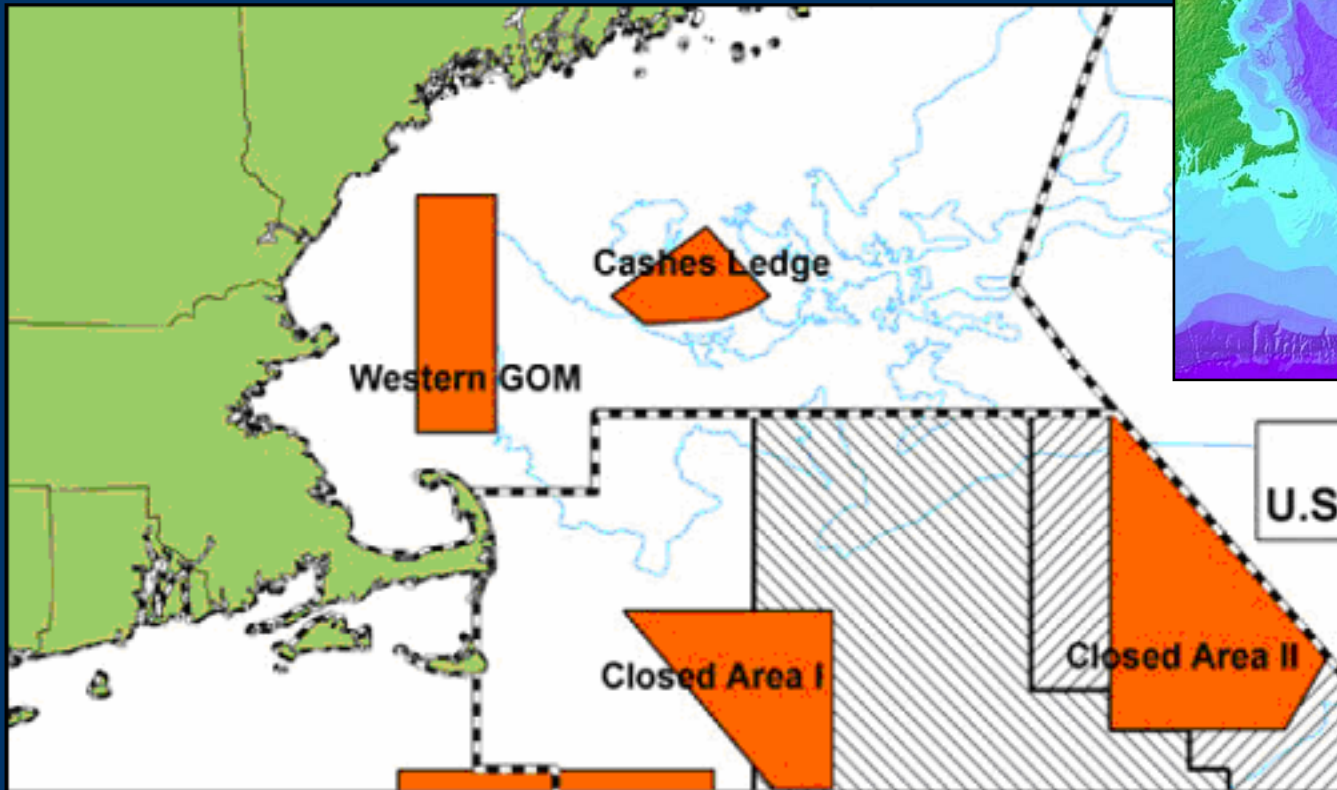
1994: New England Fishery Management Council closes 28% of Georges Bank to groundfishing, year-round

1998: New England Fishery Management Council closes Western Gulf of Maine area to groundfishing, year-round

Georges Bank and Western Gulf of Maine closures

Area closed on Georges Bank: 3940 km²

Area closed in the Western Gulf of Maine: 3010 km²



Source: NOAA Fisheries

Source: Bigelow Laboratory for Ocean Science

Introduction to marine protected areas

1974: first National Estuarine Research Reserve created

1974: first National Marine Sanctuary established

1976: Fishery Conservation and Management Act passed

1983: U.S. claims Exclusive Economic Zone

1996: Sustainable Fisheries Act

2000: Executive Order 13158 issued

2001: National Research Council report published

2003: NOAA's MPA Center formed

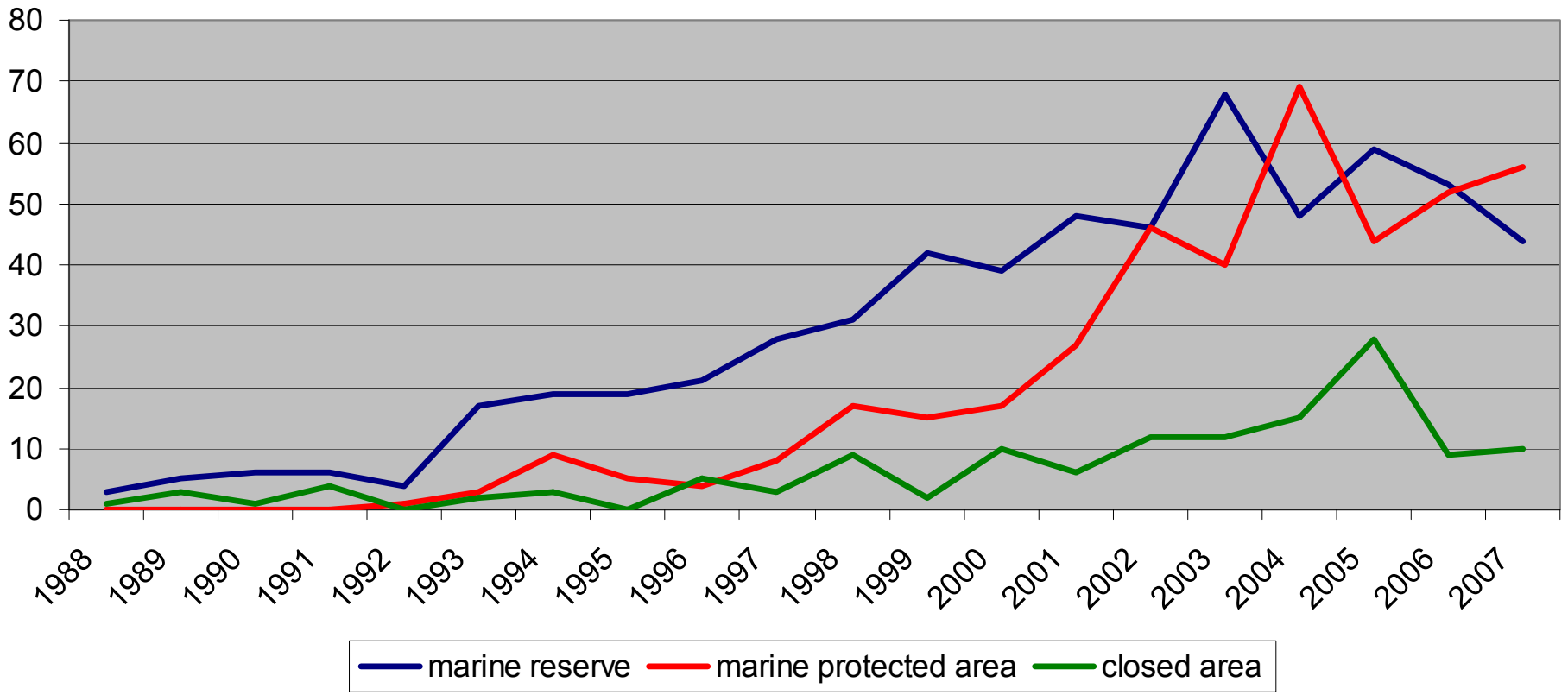
2006: Papahānaumokuākea Marine National Monument designated

Image courtesy of NOAA FGBNMS/UNCW-NURC



The rise of MPA research

Keywords in Aquatic Sciences and Fishery Abstracts (ASFA) Database Publications



...and the diminishing role of closed areas in the literature

Confusion in the literature (Part I)

What are MPAs?

- Most frequently-used international definition: “Any area of inter-tidal or sub-tidal terrain, together with its overlying water and associated flora, fauna, historical, or cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed **environment**.”
- U.S. federal definition: “An area of the marine environment that has been reserved by Federal, state, territorial, tribal or local laws or regulations to **provide lasting protection** to part or all of the **natural and cultural resources** therein.”
- Roberts and Hawkins, 2002: “MPAs are any area of intertidal or subtidal terrain, together with its overlying water and associated flora, fauna, historical, or cultural features, which has been reserved by law, or other effective means, to be **protected from all fishing, extractive, or harmful uses**.”

Confusion in the literature (Part II)

Are New England closed areas MPAs?

Agardy <i>et al</i> 2003?	Yes	
Murawski <i>et al</i> 2005?	Yes	
Witherell and Woodby, 2005?	Yes	
Beddington <i>et al</i> 2007?		No
Collie 2007?		No
Partnership for Interdisciplinary Study of Coastal Oceans 2007?	Yes	
Congressional Research Service 2008?		No
Global MPA database 2008?		No
NOAA's MPA Center 2008?	Yes	

Possible sources of confusion

- Species-specific fisheries tools rather than ecosystem-based biological conservation tools?
 - Counterpoint: Can they be considered species-specific tools when they prohibit fishing for a 19-species complex?
- Original or primary stated goal was to lower catches, and therefore not broad enough?
 - Counterpoint: Goals have evolved and now include habitat protection. Also, is the goal of the area what matters, or the effects of the closure?
- Not explicitly permanent?
 - Counterpoint: They fit the MPA Center's definition of permanency.
- Does the process need to fit some format (i.e. certain level of transparency, focused studies, or stakeholder involvement)?
 - Counterpoint: It would be difficult to make a judgment either way based on process; so little has been published about the process in these cases.
- Not “no-take reserves,” and therefore not really protected?
 - Counterpoint: Stellwagen Bank National Marine Sanctuary has even fewer restrictions, but many sources consider Sanctuaries MPAs.

Recording history

Interview questions asked of key informants:

- What was the goal(s) of this closed area upon its designation?
- Have the goals of the closed area changed? If so, how?
- What kind of information did you consult when designating this closed area?
- How did you decide upon the boundaries of this closed area?
- Who had input into the final decision?
- What did you envision as the time horizon for this closed area?
- Do you think this closed area has accomplished, or is accomplishing, its goal(s)? How do you know?
- Is there any advice you would offer other decisionmakers in similar roles?

Answering the question

	Goals	Decisionmaking process	Performance
Georges Bank			
Western Gulf of Maine			
Papahānaumokuākea			
Stellwagen Bank			

Justification for the research

- This is an exploratory, rather than a hypothesis-based, thesis. My data are the responses from my subjects, and many of the questions are open-ended “how?” questions.
- Clarifying what a concept is – including understanding its evolution – increases the chances it will be applied effectively.
- Missing the opportunity to study a closure means losing the ability to learn from its successes and mistakes.
- Managers are struggling to understand how other types of protections, like essential fish habitat, habitat areas of particular concern, and critical habitat, might fit within the spectrum of MPAs.

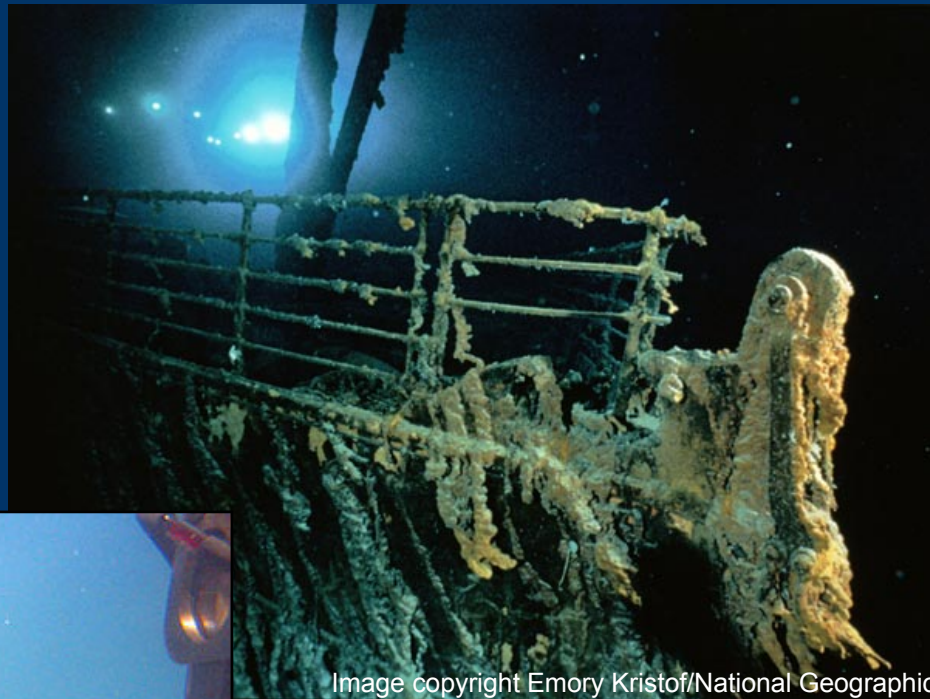


Image copyright Emory Kristof/National Geographic

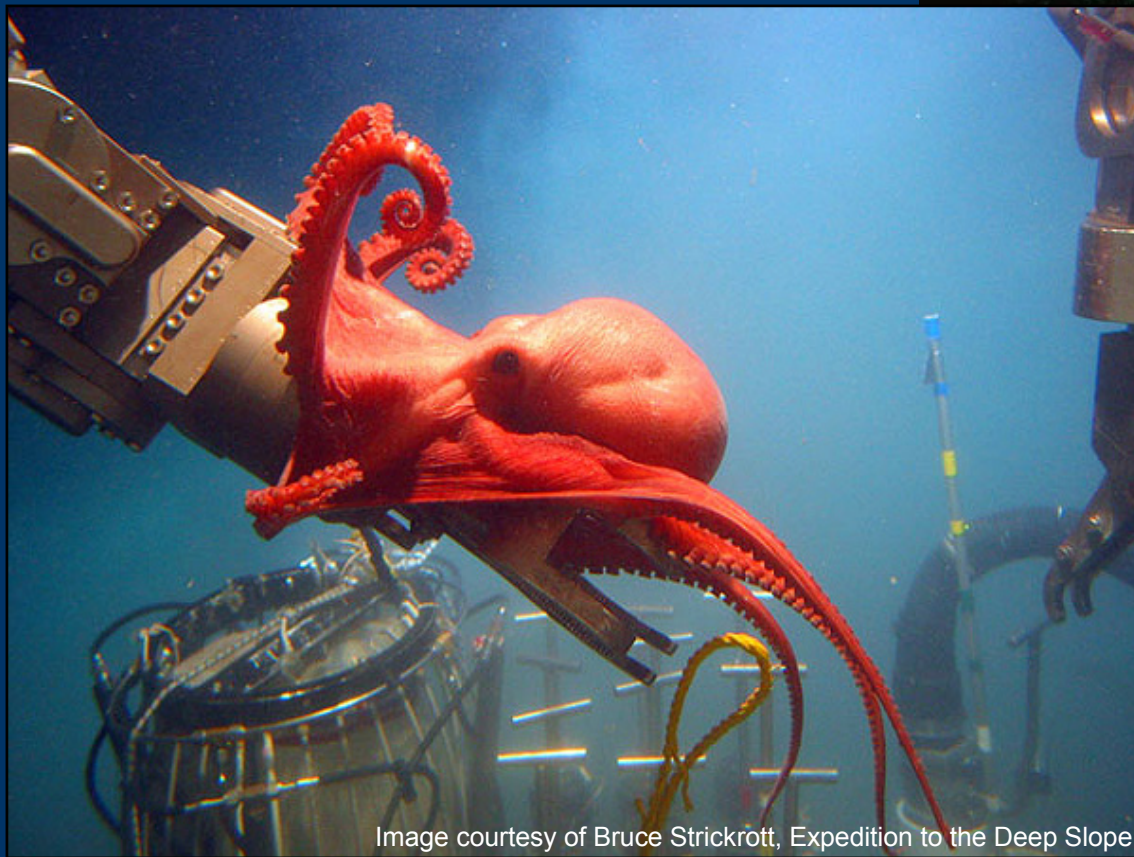


Image courtesy of Bruce Strickrott, Expedition to the Deep Slope



Image courtesy of The Hidden Ocean Arctic 2005 Expedition, NOAA-OE

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Follow scientists as they explore underwater sinkholes and waterfalls to gain a better understanding of the unique ecology found in the Thunder Bay National Marine Sanctuary .

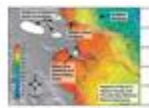


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- [How to Pilot an ROV](#)



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(August) Learn why the



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(QuickTime, each over 550k).



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Okeanos Explorer



Live from seafloor to scientists ashore!

Ocean Hall



Artist's early rendition of Ocean Hall

Opening Saturday, September 27!

The End!

I'm sorry,
but all questions must be submitted in writing.
- *Willy Wonka*

