Atlantic Large Whale Take Reduction Team Update:

Feasibility Subgroups

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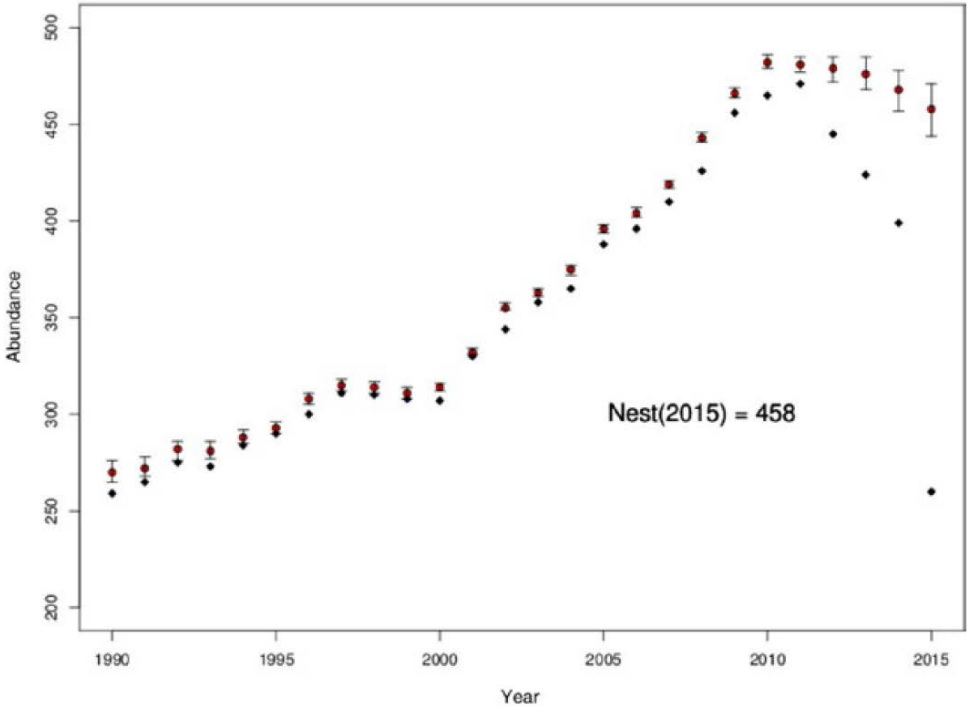
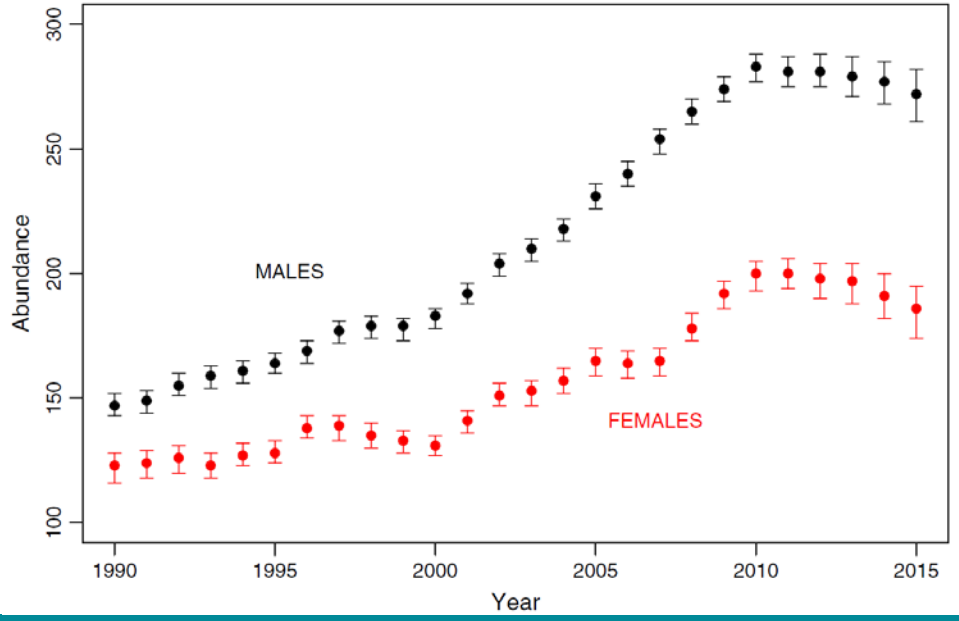
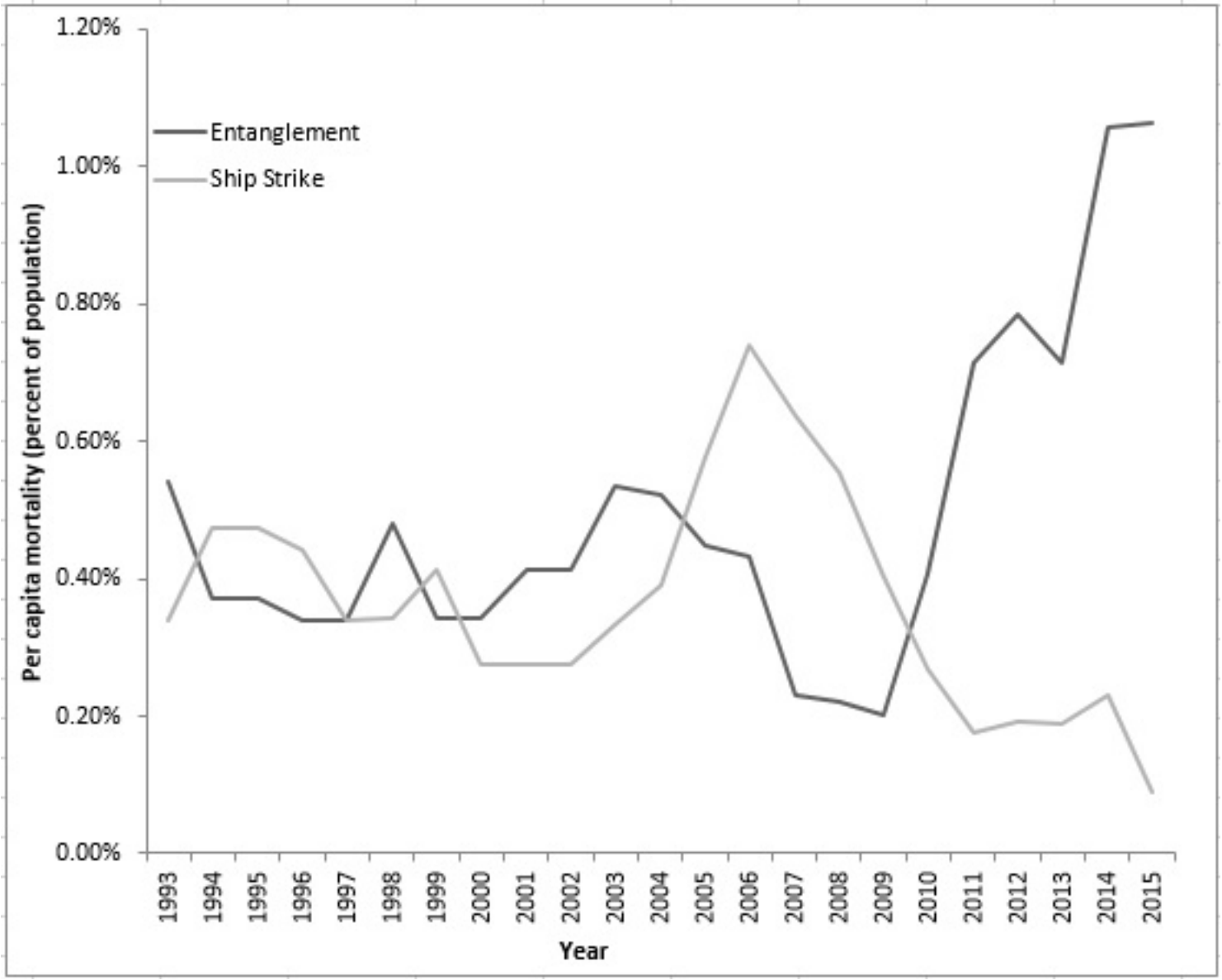
2017 Five-year Right Whale Status Review

- Findings confirmed an Endangered status due to:
  - A low rate of reproduction,
  - Longer calving intervals,
  - Declining population abundance,
  - Continued mortality from vessel and fishing gear interactions,
  - Changes in prey availability, and
  - Increased transboundary movement and risk.





Source: Pace *et al.* 2017


1.20%
1.00%
0.80%
0.60%
0.40%
0.20%
0.00%
Per capita mortality (percent of population)
Entanglement
Ship Strike
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
Year

TRT Activities in 2018

- **Planned:** Fall 2018 Full TRT meeting to consider measures that may be necessary to reduce the effects of gillnet and trap/pot gear entanglements on right whales

- **Ongoing:** Two TRT Subgroups investigating the feasibility of:
  1. Ropeless fishing
  2. Whale release rope & gear marking

TRT Feasibility Subgroups

- Non-decision making groups focused on feasibility discussions
  - Technological: Does the technology exist (or when will it exist)?
  - Functional: Will it work (or what is the process to learn if it will work)?
  - Economic: Is it cost-effective (or what is the development time needed to make it cost-effective)?
- Both subgroups met twice over the past few months. Once via webinar and once in-person.
- Expect to complete Feasibility Report in the Summer and share with the full TRT in October to inform their discussions moving forward.

Ropeless Fishing Subgroup

- Further investigation of ropeless technology was supported.
  - Must involve fishing industry in the research and development.
  - Consider allowing ropeless fishing in closed areas.
  - Request that the full TRT develop “best practice” criteria for where and how ropeless investigations, especially if in closed areas, would occur.
- Ropeless technology is not a near term solution
  - With partner efforts, and fishermen’s participation in further research, confidence that progress in ropeless technology will continue to inform TRT discussions
- Group identified feasibility concerns that can guide researchers and identified some best practice considerations for TRT to include in the Feasibility Report.

Whale Release Rope/Gear Marking Subgroup

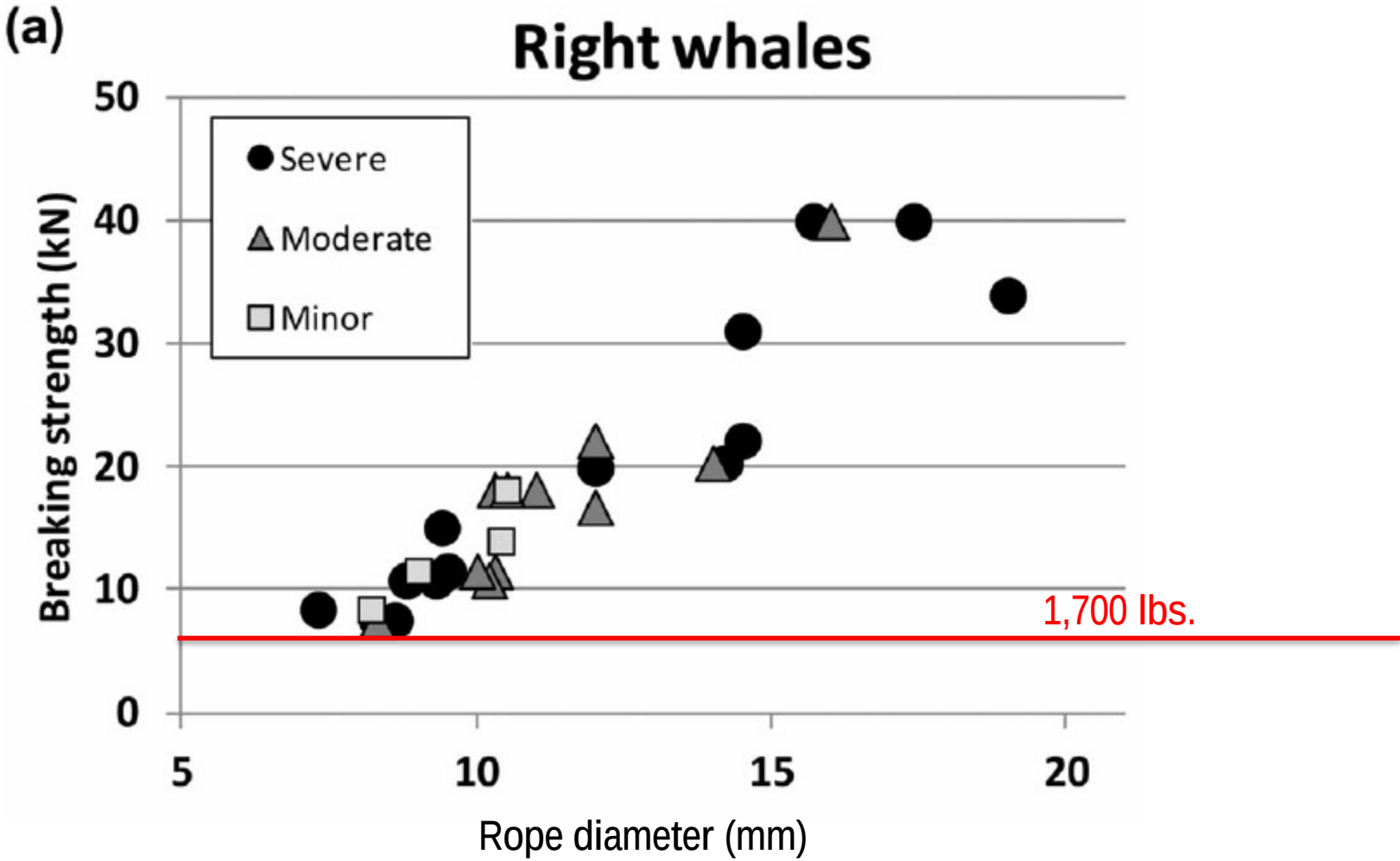
Themes that emerged during discussions:

- Shifting distribution of whales makes it difficult to evaluate effectiveness of current measures or to design new measures
- Lack of data on existing fixed gear (relative distribution and abundance of various line diameter fished or functional breaking strength) confounds attempt to interpret significance of relationship between reduced serious injury and low breaking strength gear

Upcoming opportunities to improve data:

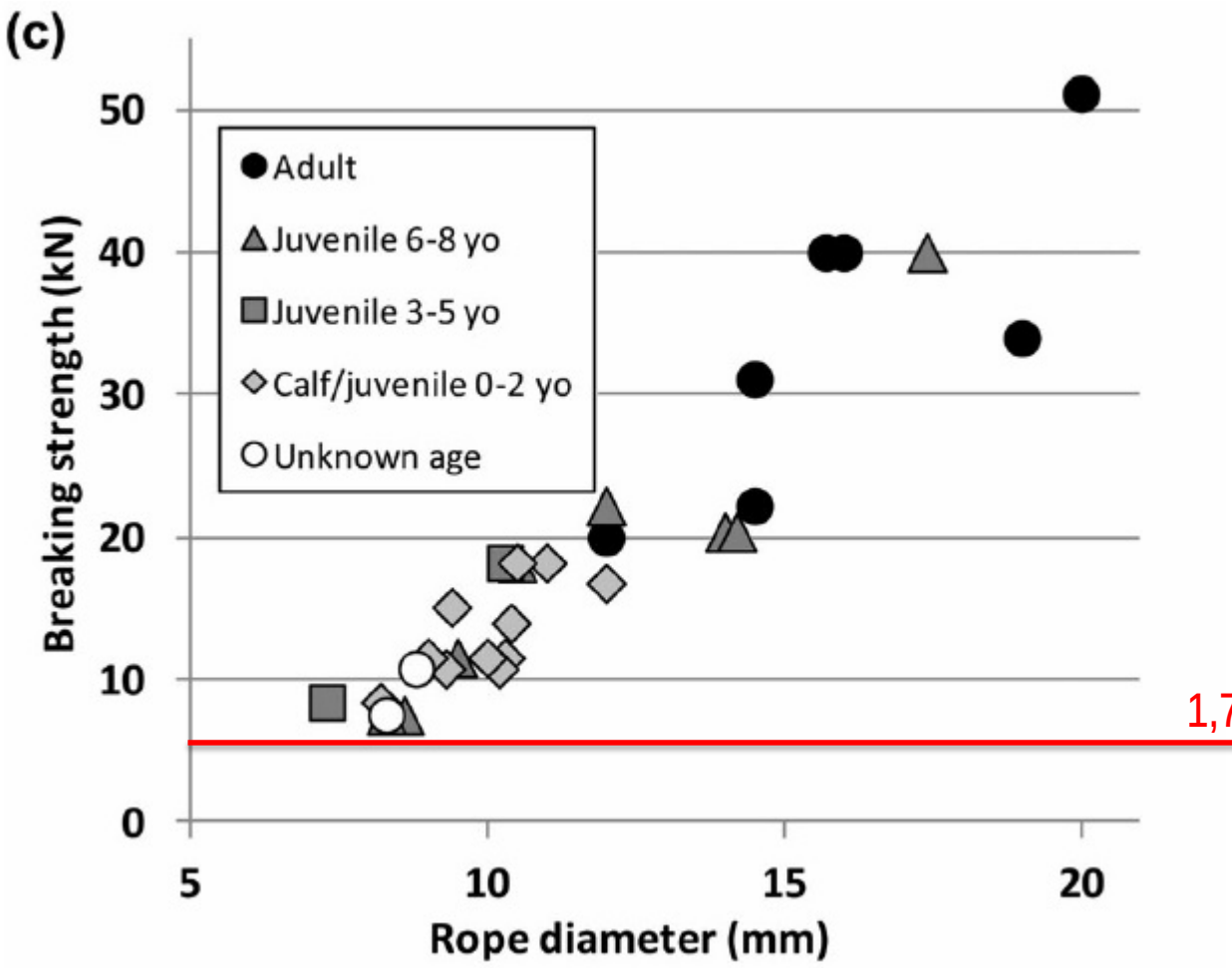
- ASMFC and NMFS supplemental gear data reporting efforts

1,700 lb. Breaking Strength Rope



Source: Knowlton *et al.* 2016

1,700 lb. Breaking Strength Rope



Source: Knowlton *et al.* 2016

Whale Release Rope Discussion

Examples of whale release rope options discussed:

- Reduced strength “tag line” connecting surface system to extended groundline
- Hollow weak “sleeves”: inserted into line at intervals to reduce breaking strength
- 1700 lb. manufactured breaking strength line use

Common feasibility considerations for further discussion by the full TRT:

- Safety
- Scalability across region and fisheries
- Enforceability
- Operational considerations: time, costs, breakage, depths, bottom type
- Evidence and evaluation of relative contribution to overall recovery efforts

Gear Marking Discussion

Impacts of previous gear marking rule (2015) from preliminary retrieved gear analysis:

- Doubled the frequency and size of marking on fixed gear which doubled the percentage of time that retrieved line could be attributed to a fishery or location

Discussions:

- No new rope manufacturing or technological solution on the horizon
- Feasibility report will include review of issues such as: expansion of geography where marking is required, frequency of marks required, size of marks to increase visibility of gear observed from air or shipboard but not retrieved, buoy marking
- Key feasibility concerns to be discussed include safety, operational endurance, scaling, fishermen's purchasing, selling and recycling practices

US/Canada Joint Effort on Right Whales

- Bilateral Right Whale Working Group
    - Representatives from the Canadian and US governments
    - Scientists and Resource Managers
- Met in Boston in September
- Met in Montreal in December
- Met last week in Boston
- DFO representative attended weak rope/gear marking subgroup discussion
- Working to identify areas where both nations can jointly prioritize and fund research and management efforts

Questions?

Image collected under MMPA Research permit number 17355
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