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Thorny Skate

Research Updates

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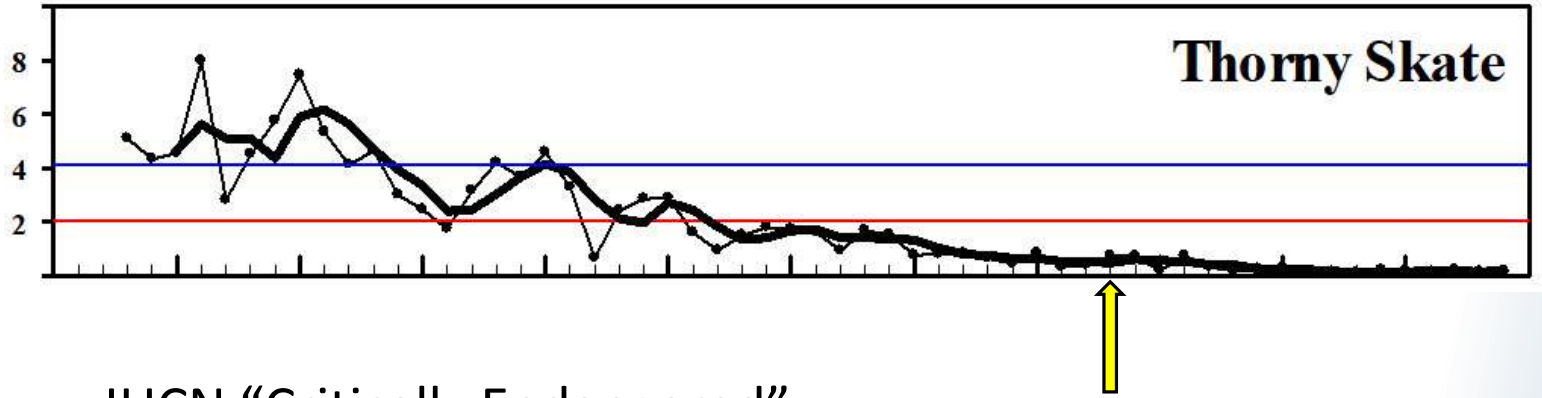
Background

- Thorny is overfished
  - Rebuilding began in 2003
  - Rebuilding deadline is 2028 (25 years)
  - Current B is 4.3% of target



  - IUCN “Critically Endangered”
  - ESA petitions have resulted in negative findings (not listed)

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ICES Journal of Marine Science

ICES Journal of Marine Science (2019), doi:10.1093/icesjms/fsz177

Utilization of pop-up satellite archival transmitting tags to evaluate thorny skate (*Amblyraja radiata*) discard mortality in the Gulf of Maine groundfish bottom trawl fishery

Ryan Knotek [1,2]*, Jeff Kneebone[2], James Sulikowski[3], Tobey Curtis[4], Joseph Jurek[5], and John Mandelman[2]

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- Funded by BREP
- Post-release mortality rate = 24.5% (N=61)
- Follow-up research identifying bycatch hotspots in prep

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Using conventional and pop-up satellite transmitting tags to assess the horizontal movements and habitat use of thorny skate (*Amblyraja radiata*) in the Gulf of Maine (in review)

J. Kneebone, J. Sulikowski, R. Knotek, D. McElroy, B. Gervelis, T. Curtis, J. Jurek, and J. Mandelman

- Funded by SK, BREP, and NE Consortium
- 2,195 conventional tags and 128 mrPATs deployed in GOM
- 125 “recaptures” after 22-3,435 days at liberty
- Linear movements of 1-47 km
- Depth range = 27-201 m, Temperature range = 2.5-12.5 °C

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Projecting the effects of climate change on thorny skate (*Amblyraja radiata*) on the Northeast US shelf using trawl and longline surveys (in review)

B. Grieve, J. Hare, and D. McElroy

- NEFSC study
- Approach similar to that used on other species (e.g., cusk)
- May help understand if trends in B are being affected by climate
- Some other multi-species studies suggest ongoing and predicted losses of thorny skate preferred thermal habitat

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LENFEST OCEAN PROGRAM

A research project
July 2019

SUPPORTING SCIENCE AND COMMUNICATING RESULTS.

G. Naylor, S. Corrigan, J. Denton, J. Kneebone et al.

- Using high-resolution genomics to explore spatial population structure
- Samples from >500 individuals range-wide
- Research ongoing

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Conclusions

- Lots of new information incoming on thorny skates!
- Integration of results may inform Council on rebuilding strategies
- Important to determine drivers of B trends (F, climate, etc.)
- Still many questions on life history, population structure

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