



**NOAA  
FISHERIES**

Alaska Fisheries  
Science Center

# Gulf of Alaska September 2018 Report

# Agenda

1. Northern rockfish
2. Pacific cod
3. Thornyheads
4. Sharks
5. Shallow Water Flatfish
6. Pollock
7. Regional Action Plan
8. Demersal Shelf Rockfish/Yelloweye Rockfish
9. Harvest specifications

# Northern rockfish

- Recommended retaining design-based model AND including run with VAST model-based index
  - Authors indicated they would examine retrospective pattern in more detail for VAST model
- Requested workgroup (led by Curry Cunningham) investigate VAST application (8 specific items)

# Pacific cod

Lead author responded to CIE requests

**Noted** key issues to be addressed in November assessment:

- Evaluate more clearly pre and post 2007 growth differences

# Pacific cod

Agreed with the logical progression of models being considered

- Including an index relating bioenergetics and natural mortality

Model	Data	SS version	Maturity	Aging bias	Marine heatwave index for M	Prior CV on M	VB prior ( $l_{inf}/K$ )
17.09.35	Same as 2017	2.24	Age-based			0.10	Uniform
17.09.35	Same as 2017	3.30	Age-based			0.10	Uniform
18.09.38	Same as 2017	3.30	Length-based			0.10	Uniform
18.09.45	Same as 2017	3.30	Length-based	✓		0.10	Uniform
18.10.38	No age data pre-2007	3.30	Length-based			0.10	Uniform
18.10.43	No age data pre-2007	3.30	Length-based		✓	0.10	Uniform
18.10.44	No age data pre-2007	3.30	Length-based			0.41	Normal 99.46/0.197
18.10.46	No age data pre-2007	3.30	Length-based		✓	0.41	Normal 99.46/0.197
18.11.38	No age data	3.30	Length-based			0.10	Normal 99.46/0.197

# Thornyheads

- The Team recommended that
  - the authors bring forward the proposed random effects model that includes the longline survey index
  - the current year's (2018) longline RPW should be included in the model to be presented in November
  - the authors contact the Age and Growth Program to revisit if production ageing for shortspine thornyheads is possible

# Sharks

- Review of a defensible Tier 5 estimation method presented
  - Availability to survey evaluated
- **The Team encouraged an examination using VAST...**
- **Also, author was encouraged to explore combining trawl and longline survey catches, similar to what is being done with thornyheads**

# Shallow Water Flatfish

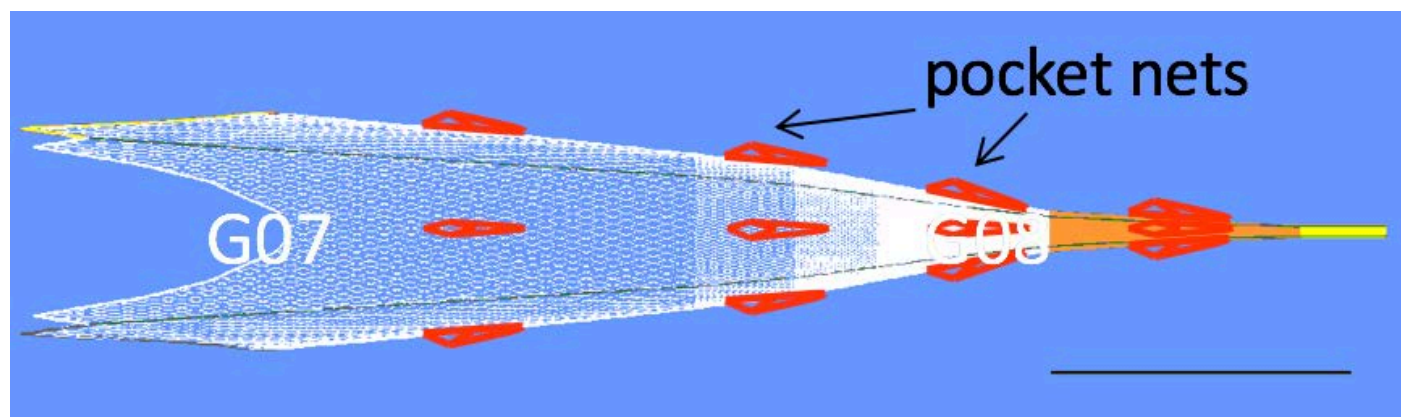
Mainly housekeeping  
(mixed tiers for this complex)

The GOA Team requested that the whole Shallow Water Flatfish complex follow the Tier 3 guidelines for partial assessments (a full assessment followed by 3 years of partial assessments).



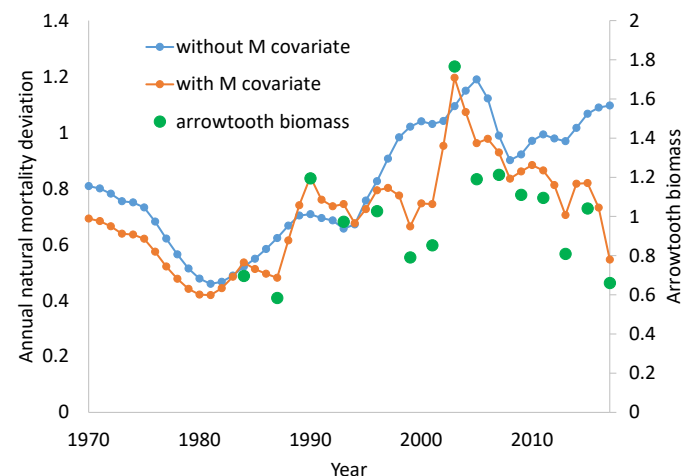
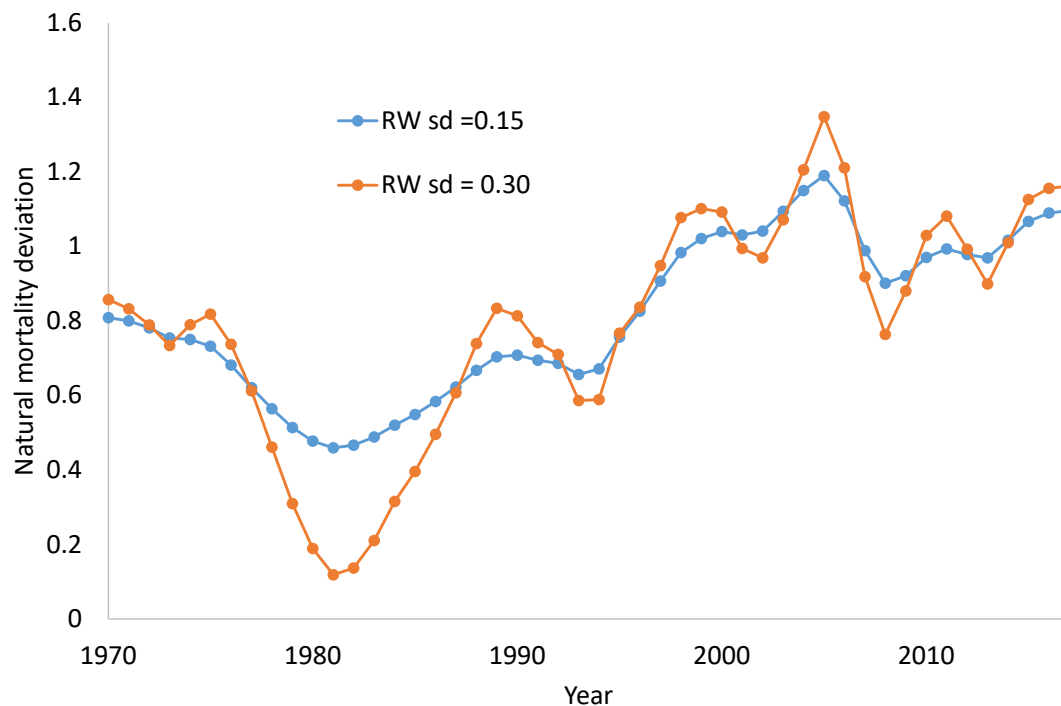
# GOA Pollock

- The 2018 winter Shelikof Strait survey (down a bit from last year but still comparatively high),
- Pocket net study
  - corrects acoustic survey estimates to account for escapement of juveniles from the midwater trawl
  - Proposal to correct the historical surveys using aggregated data
  - use current survey data for 2018 and for future surveys.



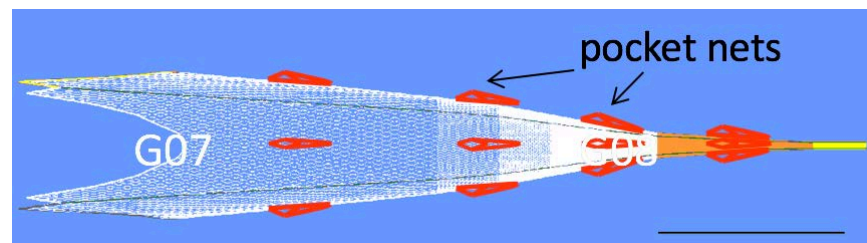
# GOA Pollock

- New alternative models
  - Random-walk time-varying values of natural mortality.
  - Related to abundance of arrowtooth flounder
  - Working with Cheryl Barnes, a graduate student at UAF. The Team noted a number of things:



# GOA Pollock

- The Team noted
  - A cohort effect of differential mortality over time may affect results
  - Concern about the assumption of proportionality between predator abundance and natural mortality
  - Change in  $M$  by year seemed abrupt
    - May be a consequence of fitting to arrowtooth survey data



# GOA Regional Action Plan

## A part of NMFS Climate Science Strategy

The Team heard from a student extending another multi-species model to the GOA

Other NMFS activities such as surveys and process-oriented research are important elements

New research is also planned

- Ocean acidification

- Projection of future oceanographic conditions, and

- Analysis of community-level economic impacts

Main objectives of the plan are evaluating climate change impacts on fisheries management and on fishing communities in the Gulf of Alaska



# Demersal Shelf Rockfish/Yelloweye Rockfish

- 2018 Assessment nearly complete  
(full document presented)
- **The Team recommended an examination of converting ROV determined lengths to weights in order to examine the similarities/differences between the surveyed and harvested populations.**

# Stock structure assignments

- Stock structure templates for 2019:
  - GOA Pacific cod, flathead sole, and northern rockfish
- 2020:
  - rex sole, demersal shelf rockfish and sculpins

# Harvest specifications

- “...the PT reviewed the presentations made throughout the Joint PT and GOA PT meetings to identify issues that might warrant changes to the proposed specifications, rather than simply rolling over the current specifications. ... Other stocks, based on reviews and ESP reports, indicated that there were no issues or concerns warranting any changes to the existing specifications for the proposed 2019 and 2020 specifications (understanding that new analyses being prepared in the next month will affect these values when the Plan Team recommends the final 2019 and 2020 specifications).”