



Atlantic States Marine Fisheries Commission

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Northern Shrimp Technical Committee Webinar and Conference Call

Call Summary

Wednesday, October 2, 2019

1:00 – 2:30 pm

Technical Committee Members: Maggie Hunter (ME), Robert Atwood (NH), Kelly Whitmore (MA), Anne Richards (NMFS), Alicia Miller (NEFSC)

ASMFC Staff: Katie Drew, Dustin Colson Leaning

The Northern Shrimp Technical Committee (TC) met via conference call and webinar to address four items:

- 1) Receive an update on the Summer Survey Work Group;
- 2) Review data from the Maine & New Hampshire inshore trawl survey, NEFSC 2018 fall survey, and the NEFSC summer survey tow calibrations;
- 3) Determine criteria for running a full stock assessment model versus performing a traffic light analysis; and
- 4) Setting tasks and timelines for completing the stock status report.

Summaries and recommendations for each discussion topic are included below.

Summer Survey Work Group Update

The Section established a Work Group at the 2018 November meeting to review the summer shrimp survey. The Work Group was tasked with providing advice on the operational aspects of the management of the summer shrimp survey. The following headings highlight each of the three Work Group tasks; the bullets provide details on progress.

Improving survey operations and station success rate

- In June 2019, a third set of door calibration tows was completed (n=11); 11 calibration tows were completed in 2018 and 8 calibration tows were completed in 2017 (N_{total} = 30)
- For the 2019 Survey, Dana Hammond (New Harbor, Maine, shrimp fisherman) provided input to pre-survey selection of stations relative to towable vs. un-towable ground (**Survey WG Recommendation #4**)
- NEFSC/Pete Chase used the Shrimp Master database tool that incorporates historical tow info to select alternate towable stations for the 2019 Survey
- Captain Hammond was scheduled to participate on Leg 2 of the 2019 Survey and later notified Pete that he was unable to go (**Survey WG Recommendation #2**)
- For the 2019 Survey, 83 of 84 planned stations (98.8%) were successfully completed with usable tow and catch data

Assess the consequences of transitioning the shrimp survey to a commercial vessel

- Daily cost estimates for F/Vs were collected, ranging from \$3,700 – \$10,000 per day, compared to the R/V Gloria Michelle’s \$4,400 per day; costs for larger, seaworthy university vessels were also collected, ranging from \$7,310 – \$12,000 per day (**Survey WG Recommendation #5**)
- Substantial in-kind support is provided by NEFSC to run the survey, in the form of survey planning and coordination time, data management, and other services; switching the survey to a state agency operation on a commercial boat may require hiring new or reeducating state agency personnel
- If the survey switched to an industry vessel, between-vessel calibration tows and adjustments would be needed. Without calibration, a vessel switch would essentially mean the start of a new survey and time series.
- More detailed cost estimates and operational roles are still needed to fully respond to the Section task regarding a vessel change

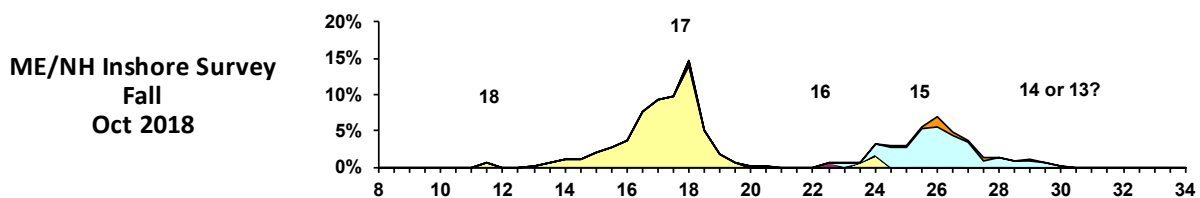
Understanding the data needs of other species from the survey

- NEFSC/Alicia generated a summary of Survey data uses in stock assessments; data are currently used in stock assessments for longfin and illex squids, Atlantic herring, red crab, witch flounder, monkfish, and white hake (**Survey WG Recommendation #6**)
- The Summer Survey catches species not represented well in the Spring or Fall NEFSC bottom trawl surveys, filling a key information gap for several stocks, plus CTD data.

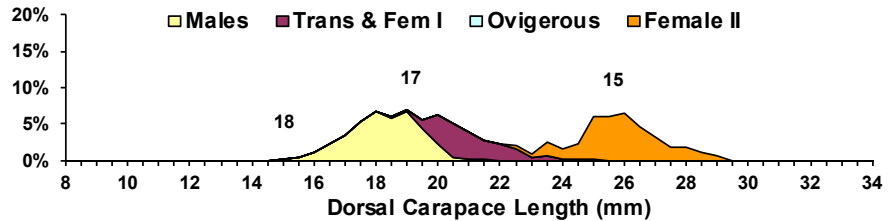
Review survey data

Maine & New Hampshire inshore trawl survey

Maggie Hunter presented the ME/NH inshore survey indices and noted that relatively few shrimp from the 2018 year class show up in any of the indices. The 2018 year class has not yet recruited to full selectivity by the gear. Even so, the 2018 year class appears especially small compared to prior year classes. The survey uses a 2-inch mesh and a 1-inch liner in the cod-end.



ME/NH Inshore Survey
Spring
May 2019



NEFSC 2018 fall survey & NEFSC summer survey tow calibrations

The TC was not able to review these data as they have not yet been released by the Northeast Fisheries Science Center. Shrimp samples have been processed but are not in the database. The data lead for survey is at sea until next week, but this should be a priority upon his return. Data will be provided later this month, hopefully in 1-2 weeks' time.

Tim Miller will be performing the calibration analysis. He will notify the TC if 39 paired tows is sufficient for completing calibrations. Tim Miller wrote in an email: "My intention is to perform analyses analogous to those in Miller (2013) for evaluating size effects on relative catch efficiency for Bigelow and Albatross IV. These methods have also been used with the 2015-2017 chain sweep/rockhopper sweep studies carried out through the Cooperative Research Branch. The approach fits several models with varying assumptions about effects of size, inter-station variability, and within-station variability on the relative efficiency of the compared gears. The best performing model as measured by AIC is used to estimate the relative efficiency and, if necessary, calibrate observations from one gear type to the other."

Determine criteria for running a full stock assessment model versus performing a traffic light analysis

Katie Drew shared that the Section is content with reviewing 2019 Gulf of Maine northern shrimp stock status through traffic light analysis rather than a full analytical length-structured assessment model this year. This is in light of existing management already established for the upcoming season (three-year moratorium on fishing) coupled with knowledge of the 2019 ME/NH inshore survey data indicating that recruitment has remained low in recent years, and was especially low for the 2018 year class. The TC came to the consensus that it would run the full assessment model for 2019 if the traffic light analysis indicated that 2019 Gulf of Maine summer survey indices are above the 80th percentile ("green"/favorable condition) of the time series. If the 2019 summer survey indices fall between the 20th-80th percentiles ("yellow"/intermediate condition) or below the 20th percentile ("red"/poor condition) of the time series, the TC will report stock status to the Section by updating the traffic light analysis.

Setting tasks and timelines for completing the stock status report

The TC discussed both the tasks necessary to complete the stock status report (outline below) as well as the estimated timeline. It was agreed that the report produced by the TC this year would probably be an abbreviated version compared to prior reports on the full stock assessment model update. The report will likely be completed 5-6 weeks after all the necessary data has been

provided to the TC. This includes 3-4 weeks of time dedicated to running data analysis and 1-2 weeks to write and revise the discussion/conclusion section of the report. The completion of the report influences when the Section will meet, which in turn relies on when the data are made available. Assuming that the data are made available in mid-October, it is likely that the Section will be polled for availability during the first and second week of December. It is most likely that the Section meeting will take place via webinar.

Northern Shrimp Stock Status Report Contents:

- **Introduction & Background**
 - Intro on biology (Maggie)
 - Description of fishery (Robert)
 - Fishery management and moratorium (Dustin)
 - Map of survey sites (Alicia)
- **Analysis**
 - Traffic light version of indices (Kelly)
 - Length frequency composition (Katie)
 - Environmental indicators (Anne/Alicia/Kelly)
- **Discussion**
 - Resource conditions (Maggie) *Katie to provide Maggie with a few sentences on stock status after analysis is conducted
 - Environmental conditions (Alicia & Anne)
- **Conclusion**
 - Summary of findings and recommendation (Maggie to draft with TC's assistance in reviewing and revising)