VIRGINIA FISHERY RESOURCE GRANT (FRG) PROGRAM
Final Report

FRG 2024- 02
Project Title: Anchored Drift Gill Net
Project Investigator: John Balderson

Background

In 2021, I and two other fishermen approached the VMRC regarding an experimental fishing permit for Spanish mackerel. Spanish mackerel are becoming more abundance in the Bay (as reported by NOAA's MRIP) but present commercial gears have not seen substantial increases in harvest. We proposed to use gill net nets of length longer than permitted under regulation (Chapter 4VAC 20-1990-10 et seq.). This regulation allows a maximum total footage of 12,000 ft for Class A gill net permittees, and 6,000 ft for Class B gill net permittees, with an individual net restricted to a maximum of 1,200 ft under Chapter 4VAC 20-1190-10 et seq. It is believed fast swimming pelagic species such as Spanish Mackerel and bluefish can avoid nets of this length due to vibrations and sound from the vessel engine and propeller during deployment. By setting individual drift gill nets of lengths up to 6,000 ft it is believed this problem will dissipate with distance from the vessel. Preliminary data from 2021 and 2022 appear promising and VMRC has stated they will allow the gear to be used again in 2023.
If successful, this gear will open up a new fishery for these species in the warm water months (April to October).

Study Purpose

To determine if a longer drift gill net fished primarily at night will be more effective at catching Spanish Mackerel and bluefish while reducing potential bycatch / dead discards and impacts with other marine traffic during fishing operations. The gear will remain attached to the vessel at all times. Fishing at night may reduce conflicts with other fishing activities (both recreational and commercial) given less boating traffic occurs after nightfall.

Workplan

All work was conducted on the F/V Madison Brooklyn (VA3452BK) in the main stem of the Chesapeake Bay and Coastal waters of Virginia up to 3 miles, primarily from dusk to dawn. Drift gill nets of up to 6000 ft (total length) were set by the vessel and remain on site during the entire soak period. At each set, the date, time set, time retrieved, starting and ending coordinates and weather conditions were recorded. Upon retrieval of the gear, all bycatch numbers by species were recorded along with numbers and weight of target species (bluefish and Spanish Mackerel).

Any protected resources were reported to VMRC within 24 hr along with a general status of the species. The project complied with all the rules and regulations pertaining to the minimum size, maximum size, harvest limit, seasons, and license/permit requirements of all harvested species. The mesh size of the gill complied with the current regulations specifying minimum and maximum mesh sizes. The gear was marked to comply with current regulations. The grantee allowed VMRC staff to observe aboard the vessel and record additional information on catch and bycatch.

Summary

- 45 fishing trips were recorded beginning June 14, 2024 to August 6, 2024. Three fishing days included multiple sets per day - June 18 (3 sets), June 19 (2 sets), July 8 (2 sets).
- The net used was 3 1/4 inch mesh and 4,000 feet long for the first 36 sets. The last 9 sets (July 28 – Aug 6) used mesh 3 1/4 and 3 3/8 and 2,500 feet long.
- 15 sets were conducted at night (8:30 pm) and 34 sets early am (4:00 am)
- Depths ranged from 27 ft – 46 ft. Two depths were not recorded.
  27 (1), 28 (2), 30 (1), 32 (5), 33 (1), 34 (1), 35 (3), 36 (2), 37 (3), 38 (4), 39 (5), 40 (6), 41 (3), 42 (5), 43 (3), 44 (1), 46 (1)
- Target species harvests during this time were approximately 29,000 lbs Spanish Mackerel, 2,700 lbs Bluefish, and 200 lbs Butterfish
- Bycatch numbers were low overall. Nine bycatch species were recorded. Only three bycatch species had total numbers above 3 individual fish - Sandbar shark, Garfish, and Cobia. Sandbar sharks were the most common with total numbers less than 75 and with an average of 4 per set. Garfish were even lower in abundance with an average of 3 per set. Less than 20 cobia were discarded from sets over the whole project and were only in two of the sets.

Study Thoughts / Conclusions

This fishery worked out well and above my expectations. There was minimal to no by catch. Conflicts between this fishery and the recreational fishery were significantly decreased as well. There were no interactions due to the time frame the fishing took place. This fishery also does not affect the flow of marine traffic. In conclusion I feel this was a very successful fishery with minimal concerns. All my data was submitted to VMRC and we met after the project.

Outcome

On April 22, 2025, the Virginia Marine Resources Commission approved amendments to Chapter 4VAC 20-1190 “Pertaining to Gill Net Control Date” to establish an extended drift gill gear license (up to 6,000 ft) and to develop associated gear requirements, season and time restrictions. This new gear will be available at all VMRC license agents beginning May 1, 2025. The amended regulation can be found here: [Regulation 1190]