

Request for Participants: Test Tows for 2017 Cooperative Sampling Program for Northern Shrimp

Introduction

The Atlantic States Marine Fisheries Commission (ASMFC) and the Massachusetts Division of Marine Fisheries (MA DMF) are seeking one Massachusetts trawling vessel and captain to collect northern shrimp samples in 2017 according to the schedule below, fishing one trip per week for eight consecutive weeks. Participants will deliver two shrimp samples to the MA DMF office in Gloucester each week, and will be allowed to land and sell up to 1,200 pounds of shrimp per trip. There will be no other compensation.

Purpose

The purpose of the project is to collect northern shrimp samples during the winter period when the shrimp are in inshore waters, to collect data on the timing of the egg hatch, and the size, gender, and developmental stage of the shrimp. Samples will attempt to mimic those that would have been collected if there had been a commercial fishery. The ASMFC and MA DMF would also like to collect data on the performance of the compound size-sorting grate.

Location

One vessel will be selected to fish in Massachusetts waters. A vessel is not expected to cover the entire region; instead applicants should fish on traditional grounds where they would normally fish for shrimp; the fishing locations within the region will be chosen by the captain.

Schedule

The selected MA vessel will make its first fishing trip during the week of January 16, 2017, and then fish once a week for the next seven weeks, for a total of eight trips, ending by March 12, 2017.

Vessel and Gear

The captain must have historic northern shrimp fishing experience in the region(s) for which he/she applies, and must have documented shrimp landings between 2000 and the ASMFC control date of June 7, 2011. Vessels must have a current US Coast Guard Fishing Vessel Safety Decal. The captain must be willing to take an observer. The gear must be typical, legal (for northern shrimp) trawl gear with a standard Nordmore grate, a compound grate, or a standard Nordmore with a size-sorting grate (double grate system). Preference will be given to vessels with a compound grate or double grate system. Higher preference will be given to captains willing to participate in a compound grate study. See below for more details.

Size-Sorting Grate

Preference will be given to applicants using a size-sorting grate, designed to reduce catches of small shrimp. See the attached description of the two acceptable size-sorting grate configurations: 1) a compound grate, or 2) a double grate system. The purchase and installation of size sorting grates are the sole responsibility of the applicant.

Sample Collection

During each trip, the captain should attempt to fish in locations in which he/she would normally fish for shrimp. Two 2-kg samples (about 4.5 lbs each) should be collected, chosen at random (blind) from the day's catch. All other shrimp catch may be kept or sold up to a

limit of 1,200 lbs per day. Each sample should be bagged and labeled with the name and date.

Data Collection

For each tow, the captain must record the date, the tow number (1, 2, 3 etc.), the GPS (latitude/longitude) coordinates of the tow, the tow start time, the tow duration (hours and minutes), the depth (fathoms), a description of the size-sorting grate if any, and an estimate of the number of pounds of shrimp caught. Captains will be supplied with data sheets by MA DMF. These data will be made public, and will not be confidential.

Sample and Data Delivery

Fresh samples (frozen if not delivered immediately) and data sheets must be delivered to the MA DMF Annisquam River Marine Fisheries Station in Gloucester at a mutually agreed upon time, before the next fishing trip.

Authorization

The selected vessel and captain will be operating under a MA DMF Director's Letter of Authorization (LOA) for research. Data from all shrimp tows must be reported. Any violations of the LOA terms and conditions will result in an immediate revocation of the LOA.

Vessel Selection

To qualify, applicants must supply the information listed below. If there is more than one qualified applicant, the participant will be picked through random selection (lottery). Applicants may apply for more than one region [MA (1), NH (1), ME (3)] but, if chosen, will be chosen to fish in only one region. Applicants must have documented landings for at least two years between 2000 and 2011 (but see exception below). MA DMF staff will confirm landings history from our fisheries statistics database. Applications will be reviewed by MA DMF and Massachusetts Environmental Police; marine resource violation(s) will disqualify applicants. See below for selection preference for applicants who will participate in a grate-evaluation study, or who will use a compound grate or double grate system.

To Apply

Anyone interested in applying for this project should send a letter or e-mail with the information listed below, to:

Kelly Whitmore, Marine Fisheries Biologist
Massachusetts Division of Marine Fisheries
Annisquam River Marine Fisheries Station
30 Emerson Ave., Gloucester, MA 01930
kelly.whitmore@state.ma.us

Your letter or e-mail should briefly describe:

- Your experience fishing for northern shrimp in the region for which you are applying, and any other fishing experience — MA DMF will confirm your shrimp landings history from 2000-2011 catch reports. If you shrimped during this period but the landings were reported by someone else, please provide details of the years, vessel name, and license holder who reported.
- Your vessel and gear, including the date of your USCG safety decal, and your willingness to have an observer on board.
- The general location(s) in which you would fish.
- Your plan for avoiding fixed gear.
- Your understanding of the project's purpose.
- Who your buyer will be.
- Size-sorting grate option (please choose ONE):
 1. You are willing to participate in a study of the compound grate, using the compound grate one week and the standard Nordmore the next week, and so on, switching before each trip. Applicants willing to participate in such a study are responsible for supplying a compound grate according to the attached specifications, and will get the highest preference in the selection process, but will have to do more work.
 2. You agree to use either a compound grate or a double grate throughout the project. You are responsible for supplying and installing the grate, according to the attached specifications. Applicants willing to use one of these size-sorting grates will get the second highest preference in the selection process.
 3. You will not be using a compound or double grate. Applicants with no size-sorting grate will use their standard Nordmore grate and will get the lowest preference in the selection process.

Deadline

Application letter or e-mail must be received by **5 pm, Monday, December 19, 2016.**

Size-Sorting Grate Systems

(from Addendum 1 of the Northern Shrimp Fishery Management Plan, Nov. 22, 2016)

Compound Grate (See Figure 1):

The grate is a rigid or semi-rigid planar device referred to as a “Compound Grate” because it has two different sections of parallel or non-parallel bars oriented vertically (up and down).

The top section shall be configured as a Finfish Excluder Device and shall consist of parallel bars attached to the frame with spaces between the bars not to exceed 1 inch in width. A fish outlet, or hole, in the extension of the trawl shall exist forward of the cod end and compound grate.

The bottom section will allow the escape of small shrimp and will consist of parallel or non-parallel tapered bars oriented up and down with spacing between bars of $\frac{5}{16}$ inch to $\frac{1}{2}$ inch (See Figure 1). The lower edge of the cod end will be attached to the grate at the juncture between the top section and the bottom section, creating a shrimp outlet similar to the fish outlet described above, that will allow the escape of small shrimp that pass through the bars of the bottom section of the grate.

The compound grate also has the following optional provisions:

- This grate may be fished “upside down”, that is, with the Finfish Excluder section and outlet on the bottom and the shrimp size separator section and outlet on the top.
- A webbing funnel may be installed in front of the grate designed to direct the catch toward the grate to maximize the retention of the shrimp but may not have mesh less than 1-3/8 inch stretched mesh.

A Double Nordmore Grate (See Figure 2–3):

In this setup there are two separate grates:

- 1) One of the grates must be a finfish excluder device (commonly referred to as the "Nordmore Grate System") and shall consist of:
 - A rigid or semi-rigid grate consisting of vertical parallel bars attached to the frame with spaces between the bars not to exceed 1 inch in width;
 - A fish outlet, or hole, in the extension of the trawl forward of the cod end and grate; and
 - A webbing funnel installed in front of the grate designed to direct the catch toward the grate to maximize the retention of the shrimp may be used but may not have mesh less than 1-3/8 inch stretched mesh.
 - Vessels fishing in the shrimp fishery shall not be allowed to possess regulated groundfish species.
- 2) The other grate may be fished in front or behind the Nordmore grate. The other grate shall consist of:

- A rigid or semi-rigid planar device with vertical bar spacing of 7/16 of an inch (tolerance – must be greater than 5/16 inch but less than 1/2 inch).
- The exit holes to the cod end must be at the top and no more than 10% of the surface area.
- A funnel in front of the second grate designed to direct the catch toward the grate to maximize the escape of small shrimp may be used but may not have mesh less than 1-3/8 inch stretched mesh.

FIGURES

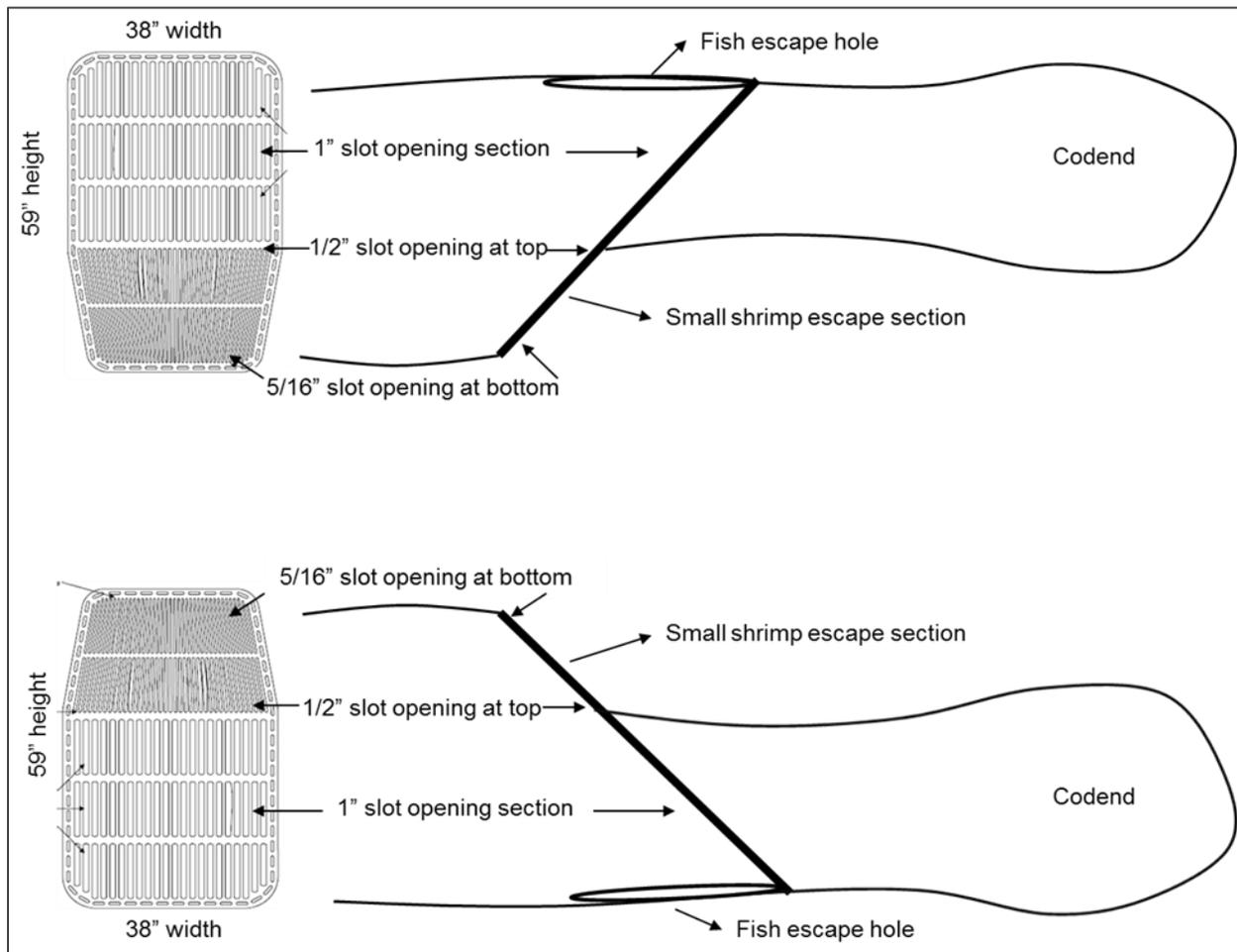


Figure 1. Schematic diagram of the compound size sorting grate to minimize the retention of small shrimp. The top panel diagrams the small shrimp size sorting section of the grate at the bottom (ventral) side of the net. The bottom panel diagrams the small shrimp size sorting section of the grate at the top (dorsal) side of the net.

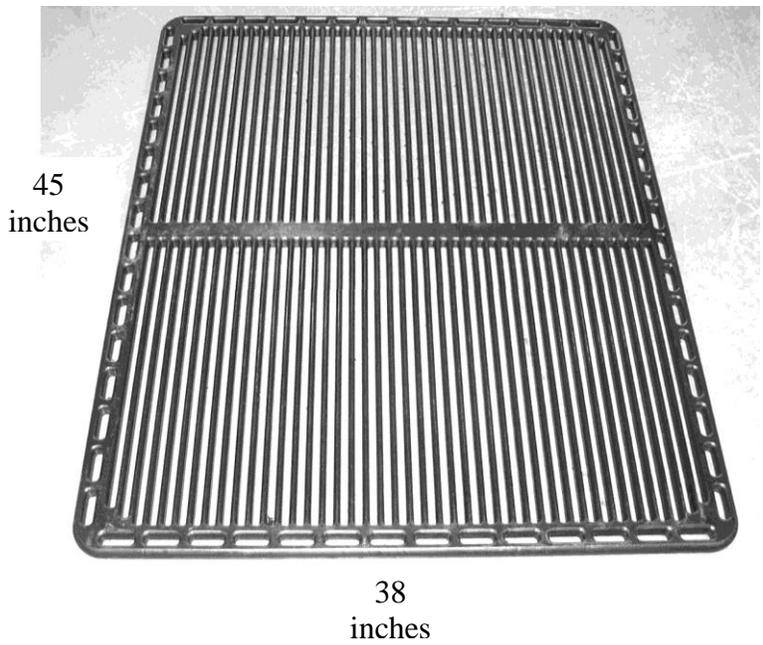


Figure 2. Recommended size-sorting grate for the double Nordmøre grate configuration (He and Balzano 2012).

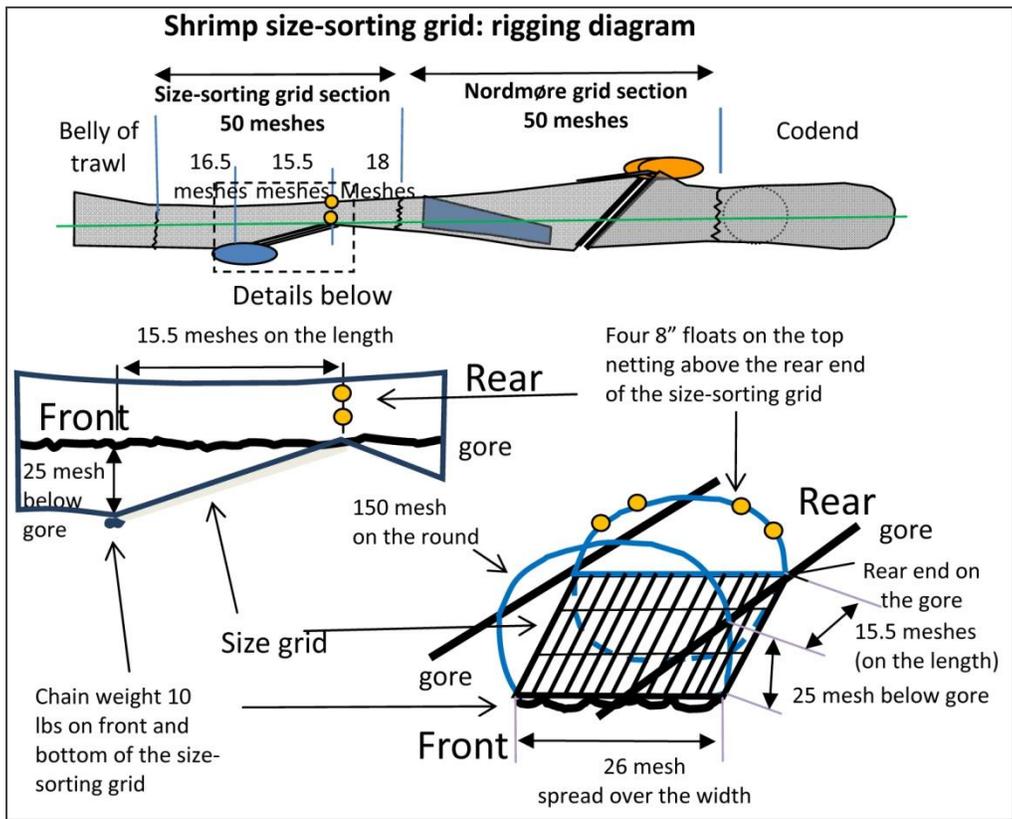


Figure 3. Shrimp size-sorting grid: rigging diagram (He and Balzano 2012).