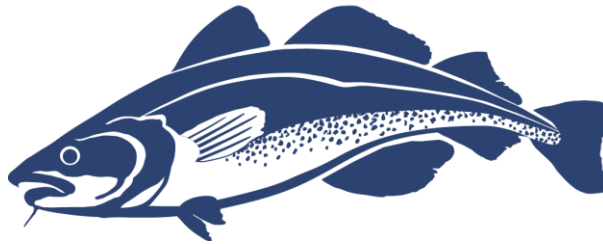


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**Massachusetts
Division of Marine Fisheries**

Marine Fisheries
Commonwealth of Massachusetts



**Massachusetts 2020 Compliance Report to the
Atlantic States Marine Fisheries Commission –
Horseshoe Crab**

Submitted by:

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I. Introduction

Massachusetts Division of Marine Fisheries (DMF) staff and numerous volunteer groups conducted spawning beach surveys at 11 beaches during the full and new moons during May and June. Several beaches that normally participate in the survey did not participate in 2020 due to COVID-19. Prosomal widths were taken from 1,055 bait crabs and 814 biomedical as part of our market sampling program. The bait fishery harvested 99.2% of the annual Massachusetts self-imposed quota. The number of crabs bled for biomedical purposes remains confidential due to the limited number of biomedical facilities in the state (one).

II. Request for *de minimis* status – not applicable

III. Previous calendar year's fishery

a. Bait Harvest

In 2020, 39 of 215 horseshoe crab bait permits issued by DMF were actively fished, representing a decrease of 18 active permits and four issued bait permits from 2019. Nine fishermen with Coastal Access Permits also participated in the fishery in 2020. See Table 1 for the associated harvests. Based on dealer data, 50% of the quota issued by ASMFC to Massachusetts (330,377 crabs), and 99% of the more restrictive state quota voluntarily imposed by Massachusetts (165,000 crabs) was harvested. Dealers reported purchasing 19,161 more crabs than harvesters reported selling (Table 2). This is attributed to harvester trips where catch was not reported but was reported by the dealer. Bait crabs were harvested primarily by mobile gear (trawl or dredge; 53% of harvest) or by hand (including rakes, dipnets, and hand tongs; 46%), with 1% harvested by other means (gill net, weirs, pots, etc.) (Table 3). Bait crabs harvested in May through July accounted for 70% of all bait crabs landed in 2020 (Table 4).

Table 1. Number of bait permits issued, number of permits actively fished, and number of crabs fishermen reported harvesting by permit type (data source: Massachusetts Trip Level Reports and NMFS Vessel Trip Reports).

Permit Type	# of Permits Issued	# of Permits Fished	# of Crabs Harvested
Commercial	215	39	128,980
Coastal Access	N/A	9	15,554

Table 2. Number of bait crabs reported by bait harvesters (data sources: Massachusetts Trip Level Reports, NMFS Vessel Trip Reports).

	Female	Male	Unclassified	Total
Bait Harvest	31,658	14,472	98,404	144,534

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Table 3. Number of bait crabs captured by method, as reported by harvesters (data source: Massachusetts Trip Level Reports and NMFS Vessel Trip Level Reports).

Harvest Method	# of Crabs	# of Total
Hand	66,852	46%
Mobile	76,721	53%
Other	961	1%

Table 4. Number of bait crabs harvested by month, as reported by harvesters (data sources: Massachusetts Trip Level Reports and NMFS Vessel Trip Reports). Confidential data (fewer than three individuals reporting landings) has been removed and replaced with an asterisk.

	# of Crabs
JAN	*
FEB	*
MAR	*
APR	*
MAY	55,887
JUN	25,389
JUL	20,106
AUG	18,618
SEP	11,472
OCT	5,418
NOV	3,001
DEC	*

b. Scientific and Research Harvest

As a condition of permit renewal, researchers that wish to harvest horseshoe crabs in Massachusetts are required to report the number of horseshoe crabs taken for scientific purposes. In 2020, five individuals or research organizations applied for scientific permits to collect horseshoe crabs. Under these permits, 219 crabs were collected.

c. Biomedical Fishery

In 2020, DMF issued 15 biomedical harvest permits, four of which were actively fished. This represents a decrease of four issued permits and two active permits from 2019.

Associates of Cape Cod (ACC) is the single biomedical company producing *Limulus* Amebocyte Lysate (LAL) in Massachusetts. ACC filed monthly catch reports listing the dealers from whom they purchased crabs, location of harvest, the number and sex of crabs purchased, and the ultimate disposition of the crabs (released or returned to bait market). ACC also reported the number of crabs they rejected or received dead. Per the terms of the

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Letter of Authorization issued to ACC, they must adhere to the following conditions: keep crabs moist during transport and storage, transport crabs in a temperature-controlled truck with the thermostat set between 50 and 60° F, keep crabs in the laboratory at $\leq 70^{\circ}$ F, and hold crabs in barrels no more than approximately 2/3 full.

Confidential biomedical data has been submitted to ASMFC but has been removed from this (public) report.

d. Shorebird monitoring- Not applicable

e. Benthic Sampling

DMF's Resource Assessment Survey was not conducted in 2020 due to Covid-19. This is first time that a Spring or Fall survey has been missed since the survey's inception in 1978. The survey resumed in 2021.

IV. Planned management programs for the current calendar year

a. Summary of changes from previous years

In April 2020, Massachusetts implemented an open entry trip limit of 75 horseshoe crabs for mobile gear fishermen that do not possess a horseshoe crab permit. Previously, fishermen needed a limited entry horseshoe crab permit or be granted a Letter of Authorization (LOA) from the director to retain more than six horseshoe crabs. Fishermen that were granted an LOA had the same trip limit as those with a horseshoe crab bait harvest permit (300 crabs). DMF ceased issuing LOA's in April 2020 but began issuing them again in August 2020 to address the shortage of crabs caused by reduced participation in the fishery and unexpected fishery conditions due to Covid-19.

In response to in-season adjustments to increase use of the commercial fluke quota and to reduce regulatory discards, mobile gear fishermen were exempted from mobile gear "no-fishing days" (Fridays and Saturdays during the fluke season) beginning on October 9, 2020, which allowed for the taking of horseshoe crabs as bycatch.

b. Summary of monitoring programs that will occur

- DMF will continue collecting catch reports from all crab harvesters, dealers, and scientific permit holders.
- DMF will continue to collect monthly reports from ACC (biomedical company).
- DMF will also continue to characterize the commercial fishery through market sampling.
- DMF's 2020 spring and fall bottom trawl survey were canceled due to the Covid-19 pandemic. This survey resumed in 2021 and recorded weight, number, and prosomal width by sex of individuals collected.
- DMF will continue to coordinate and support spawning beach surveys conducted in cooperation with various volunteer organizations.

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V. Law Enforcement reporting requirements

The Massachusetts Environmental Police reported one horseshoe crab violation in 2020. In May, an individual without a permit was found with 250 pounds of horseshoe crabs. The person was charged with fishing without a commercial permit and the crabs were returned to the water alive.