

5-day crab closures each new and full moon in May and June

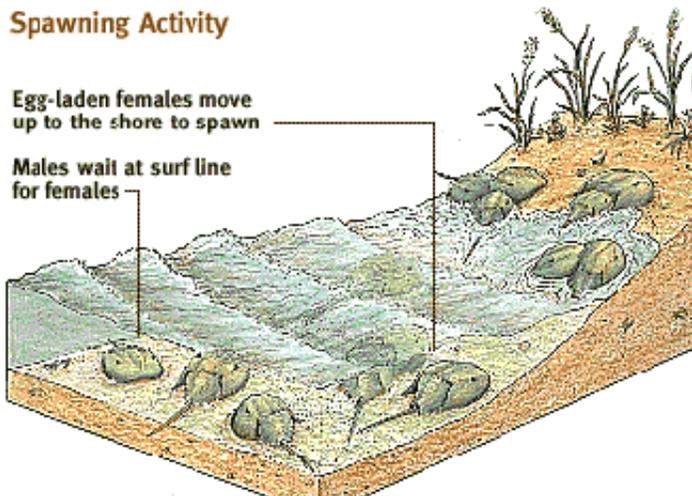
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Notice to Fishermen And Dealers Marinefisheries
Increases Protection of Mature and Spawning Horseshoe Crabs

Massachusetts Department of Fish and Game Division of Marine Fisheries advisory:

Beginning this season, horseshoe crab rules will be amended to increase protection of mature and spawning crabs and to minimize the chances of local stock depletion. Director **Paul Diodati** and the Marine Fisheries Advisory Commission approved new conservation measures to go into effect on April 16 for the upcoming season:

1. **Improve protection of spawning crabs** by adopting a series of 5-day closures around each new and full moon in May and June instead of the weekend closures;
2. **Increase the possession limit for trawlers** from 400-600 crabs during the summer period starting July 1 in order to alleviate possible shortages of crabs in the biomedical and bait supplies.
3. **Adopt a 7" minimum prosomal** (anterior body region) **width** for all crabs to prevent a re-directing of fishing effort to immature crabs.



By the beginning of the spawning season (illustration courtesy of ERDG Inc.), each female will have developed about 80,000 eggs, which are located in dense masses near the front of her shell.

These actions were taken after reflecting on the fishery performance during the last decade under the interstate management plan and state regulations. DMF's spawning beach surveys and anecdotal reports suggest some of the local areas may be depleted. Despite having some of the most liberal rules in the range of the species, the state's quota is not being filled. The permit limits, daily bag limits, and no-fishing on weekend days as conservation measures do not appear to be constraining the catch for purposes of quota management. Last year's bait fishery reported landing just under 100,000 crabs that is 1/3 less than the state's

165,000 crab quota, and just a fraction of the ASMFC approved 330,000 crab quota.

DMF is tasked with managing a statewide fishery that is actually a sum of localized fisheries. Depleted horseshoe crab stocks will have difficulty recovering because horseshoe crabs do not undergo migrations, and once depleted, their life history is not conducive to repopulating barren areas because there is no free-swimming or floating plankton stage. It would be impractical to attempt to manage on a fine (local-level) scale because that would require localized stock estimates and local harvest controls. Given the logistical challenges of managing discrete populations, DMF is seeking better regulations that apply statewide while accomplishing local conservation, and are easy to comply with and to monitor.

The slot limit proposal presented by DMF at public hearing would have created a lobster-like management regime of brood stock protection through minimum and maximum sizes. However, it was soundly rejected by the industry. It would be too cumbersome for this fishery, especially with the common practice of cutting up bait crabs into smaller parts and a lack of similar size standards in other states that supply Massachusetts with crabs when local supply is inadequate.

Recent published research demonstrated that spawning crabs will spawn on two to five consecutive nights on the same beach, and between spawning events remained within a few hundred yards of the shoreline. This life history and reproductive strategy makes the current harvest strategy of picking spawning crabs off the beach at water's edge risk prone, especially if the crabs are removed on the first of the 2-5 days that repeat spawning is expected.

The most substantial regulatory change will be the new lunar cycle-based no-fishing days strategy, designed to protect local crab stocks at their most vulnerable time during reproduction. Instead of the weekend closures, the fishery will be closed for 5-day periods around each new and full moon in May and June. This conservation strategy is more surgical in the protection of spawning crabs and would ensure most mature crabs spawn multiple times. Nearly all other states have adopted spawning protection strategies. These new rules would be nearly identical to those in Rhode Island, where harvest is prohibited for 5 days coinciding with each new and full moon in May through July. For 2010, the no-fishing dates shall be May 11-15*, May 25-29, June 10-14, and June 24-28. Closures begin at 12:01 am on the first day of the closure and end at 11:59 pm on the fifth day of the closure.

Reduction in harvest from spawning beaches will likely increase stock this summer

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There is concern that these new restrictions protecting spawning crabs could have a negative impact on the supply of crabs for both bait and biomedical uses. DMF staff examined the dealer reported transaction data and fishermen's catch report data and determined it is possible to recoup some of the projected lost landings on the open fishing days, especially from areas that are shallow embayments where crabs may be available to harvesters during non-spawning times.

A reduction in harvest from spawning beaches will likely increase the abundance and availability of crabs to draggers in the summer. For example, summer harvest by draggers occurs in Nantucket Sound where it is believed crabs congregate after departing the shallow spawning areas from southern Cape Cod beaches, Monomoy Island, Nantucket, and Martha's Vineyard.

To alleviate a potential shortage, especially after the spawning season is over, the possession limit for trawlers beginning July 1 will be raised from 400 to 600 crabs per day. Trawlers catch crabs in deeper waters after the crabs have left the spawning beaches. Harvesting crabs from a mixed aggregation after the spawning season is over is a more conservative harvest strategy, less conducive to depleting discrete stocks than the current practice of cropping crabs on spawning beaches.

Finally, as part of the research conducted by DMF to determine fishery trends, a marked increase in effort in the whelk (conch) pot fishery was observed and this increase is likely fueling a surge in demand for horseshoe crabs, its favorite bait type. The data demonstrate that in the last three years (2006-08) effort and landings were substantially higher than in the previous six years (2000-2005). Pot-hauls have increased by 67% and landings by 58%. DMF will work to address sustainability in this fishery and until that work is completed, the Director has placed a moratorium on all whelk (conch) pot permit transfers until further notice.

For more information contact Marine Fisheries at 617 626-1520.