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Study finds lobster catch rates impacted by fish farm

Port Mouton: Results of a 11-year study examining the impacts of the fish farm in Port Mouton Bay on lobster catches has found that during production periods when the fish farm was actively raising fish, market lobster catches on average dropped by 42% and egg-bearing or berried lobster counts dropped on average 56% compared to when the fish farm was not in production. Lobster catches and counts remained low throughout the study in the fishing region where the fish farm was located. The study results, published June 28 in the international journal *Marine Ecology Progress Series*, were presented Tuesday evening in Port Mouton.

The study was conducted each year from 2007 to 2017 during the last two-weeks of May, a period when lobsters are known to migrate into Port Mouton Bay. Fifteen boats and approximately 30 fishermen participated in the study. According to Inka Milewski, a marine biologist and lead author of the study, many factors are known to effect the catchability of lobsters. "A key factor is temperature, however, we found that bottom temperature in the area was not significantly different during feed and fallow years. We eliminated moulting as a factor because the fishermen catch lobster before the moulting season. We also eliminated fishing effort by standardizing catch data," said Milewski.

The study suggests odour plumes and fecal waste produced by the fish farm are the likely cause of reduced catch rates. Milewski said odour plumes play a significant role in the behaviour and ecology of lobsters because they contain chemical cues used to locate food, detect predators, find mates, select habitats, and detect environmental stressors. "The low oxygen conditions and dissolved sulphides and ammonium that can be produced in large quantities as a result of the waste released from netpen fish farms are known to have behavioural and toxic effects on lobsters," said Milewski.

Milewski said it will be important for fisheries managers to integrate multiple environmental stressors, including aquaculture, into management frameworks to ensure the health of future lobster populations and the lobster fishery, and the conservation of important lobster habitats.

Fishermen and the Friends of Port Mouton Bay have long been concerned about the impacts the fish farm was having on their Bay. "These study results confirm what we have seen on the water and in our lobster catches," said Captain Bob Swim, a fishermen and representative of the Friends of Port Mouton Bay. "We've been saying for years that Port Mouton Bay is not suitable for fish farming and we will be writing to the Minister asking that this farm site be immediately and permanently decommissioned."

A copy of the presentation made to residents can be found on the Friends of Port Mouton Bay website (<http://www.friendsofportmoutonbay.ca/>).