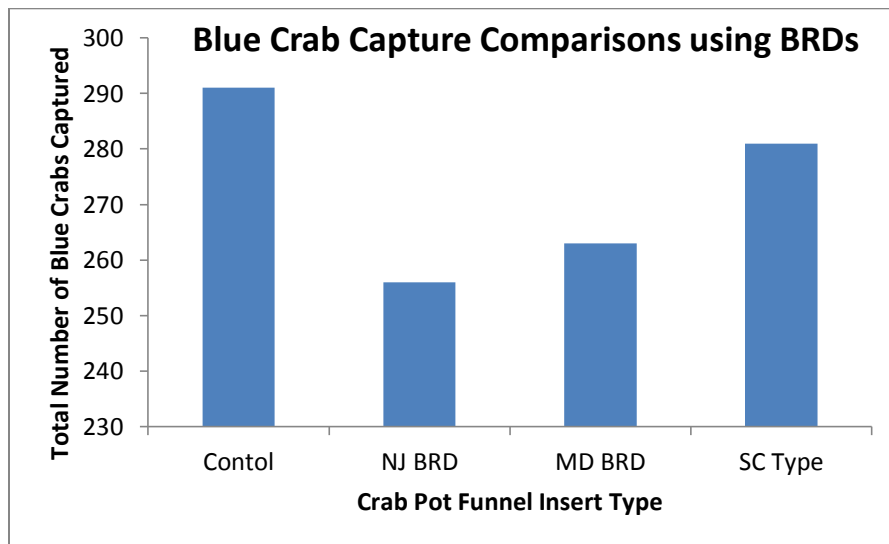


Middle School Educator's Answer Sheet to Derelict Fishing Gear Lesson

Question 1: Using Fig. 4 – Tautog onitis was found the most. Overall, there were 116 fin fish and 103 crabs considered bycatch. Yes, tautog or blackfish, like to live in reef structures so crab pots can act the same way.

Question 2: Graph to appear as follows...



The trend shows that the control captures the most crabs, but the smaller the BRD insert, the more crabs that are captured.

Question 3:

NJ BRD size is 5 x 15 cm, or 50 x 150 mm, which means that anything with a height of 50 mm could be saved. So the Oyster Toadfish, Northern Puffers and Terrapins may not have been able to access the crab pots with NJ BRDs

Question 4:

Just based upon the fact that the BRDs can reduce bycatch and seems that they can still be used to capture blue crabs, than they could be used. In terms of crabs, it would be interesting to see if the size of the crabs were different in each of the crab pots using different BRD types.

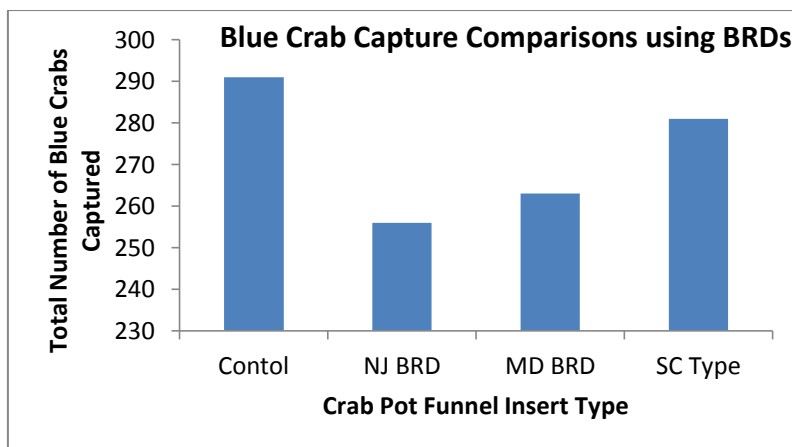
High School Educator's Answer Sheet to Derelict Fishing Gear Lesson

Question 1: Using Table 1, it seems that all of the species, except the flounder could have been kept out of the crab pots using either NJ or MD size BRDs. NJ BRDs are 5 x 15 cm (50 x 150 mm) and MD, 4.5 x 12 cm (45 x 120 cm), so the Oyster Toadfish, N. Puffers and Terrapins could have been kept from entering the crab pot.

Question 2: It seems that there were more red areas, commercial crab pots in the northern area and it looked like more green areas in the southern area along the Waretown shoreline. However, it seems that there is an overall equal amount of red and green areas along the Barnegat Bay shoreline.

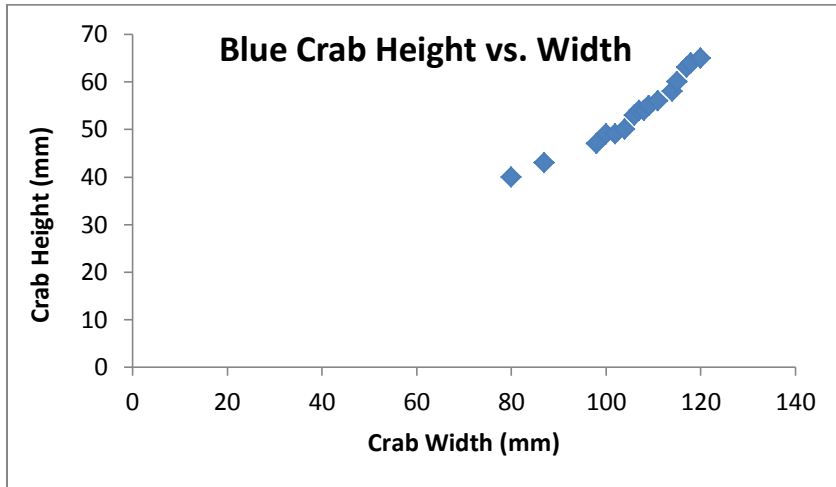
Question 3: It seems that the rebar frame may make the commercial crab pots more stable and the line seems thicker and at the bottom. The recreational crab pots seem to not have as much weight. Thus the commercial crab pot seems to be more stable.

Question 4: There seems to be a trend after with the BRDs in that the smaller BRDs seem to capture the most blue crabs; however the control, without the BRDs, captured the most blue crabs overall that makes this trend less predictable.



Research Extension Answer Sheet to Derelict Fishing Gear Lesson

Question 5: You can also change the scale of the width to make the origin “60”.



- A. Just looking at the height dimensions of the blue crabs, it would be safe to say that 12 terrapins (1006 through 1017) would not be able to enter the pot as the height of a NJ BRD is 50 mm. In terms of width, there would be no terrapin excluded based on this parameter alone.
- B. In terms of the MD BRD size, it is safe to say that 15 terrapins (1003 through 1017) would not be able to enter the pot as the height of the MD BRD is 45 cm. In terms of width, there would be no terrapin excluded based on this parameter alone.

Question 6: A positive aspect is that if the biodegradable panel works and becomes separated from the crab pot, the pot can act a habitat for such species as the Tautog and Oyster Toadfish, and some crabs too. It can also serve as an attachment area for some other organisms and can stabilize sediments if lodged in the bottom.

Question 7: Answers can vary here, but the general thought is that the use of any BRD can prevent bycatch, and the BRD that can capture blue crab species and function to reduce bycatch is appropriate. However, more data needs to be collected and it seems that the SC prototype may have an impact on crab size which was not mentioned in this lesson.