



SCIENCE UPDATE

Lobster escape hatch study, Cardigan Bay: December 2014

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Preliminary results

Data collection is complete for one fisher involved in the study and ongoing for the other fishers. The results presented are from 144 hauled pots (48 with no escape hatch, 48 with a small escape hatch, and 48 with a large escape hatch). Small escape hatches measured 80x45mm and large escape hatches measured 80x47mm. The small size was chosen to retain 87mm lobsters and the large size was chosen to retain 90mm lobsters.

Kept and Discarded Lobster and Brown Crab

The number of lobsters kept (≥ 87 mm) and discarded (< 87 mm), and the number brown crabs kept (≥ 130 mm) and discarded (< 130 mm) were recorded from the 144 pots hauled. There was no significant difference in the number of lobsters kept between the pots with no escape hatch and a small escape hatch. However, there were significantly fewer lobsters kept from the pots with a large escape hatch. Significantly more lobsters were discarded from the pots with no escape hatch than the pots with an escape hatch. As for brown crabs, there were significantly fewer kept crabs from the pots with no escape hatch compared to the pots with a large escape hatch, and there were significantly more discarded crabs in the pots with no escape hatch than in the pots with an escape hatch.

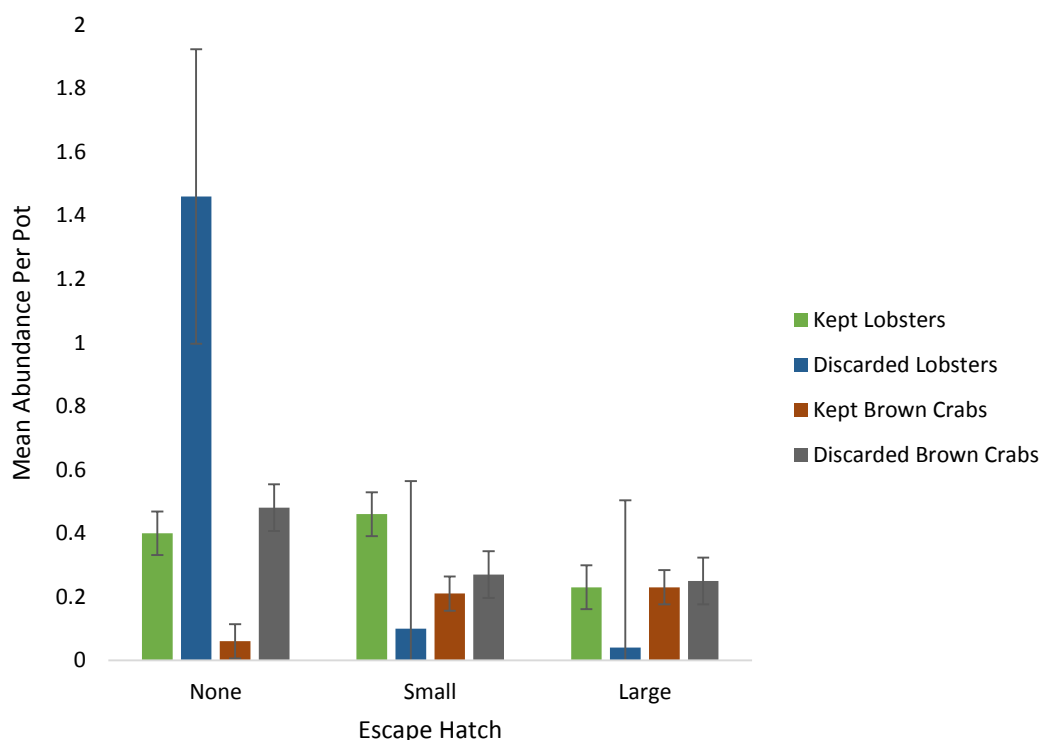


Figure 1: The mean abundance per pot of lobsters and brown crabs kept and discarded from 144 pots with three types of escape hatch in Cardigan Bay.

Bycatch

The bycatch from all pots hauled was recorded. Further analysis is ongoing with this data, but initial observations indicate a greater abundance of velvet crabs in pots with no escape hatch. This is one

of the arguments against the use of escape hatches. This is due to fishers in Cardigan Bay (and other parts of Wales) landing velvet crabs, especially in the winter months when lobster catches are lower. An economic analysis will be conducted to determine the extent of this potential loss of income.

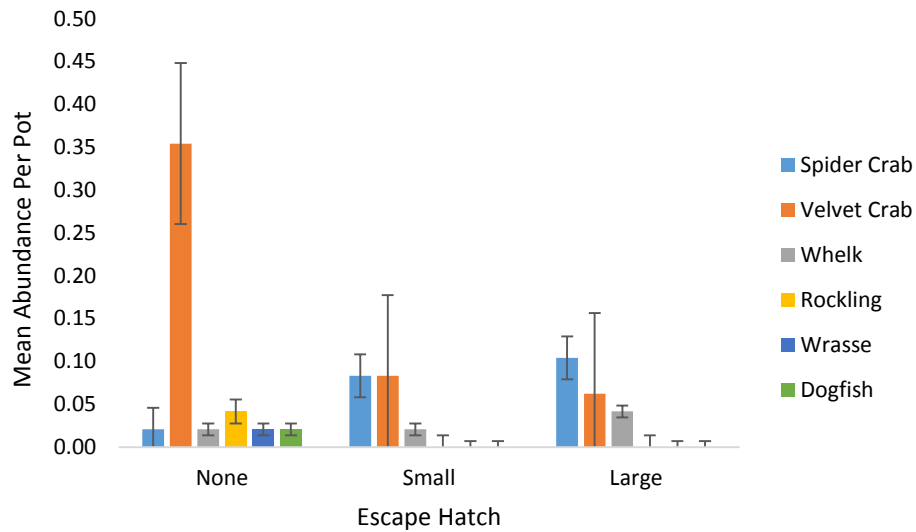


Figure 2: The mean abundance per pot of bycatch species from 144 pots with three types of escape hatch in Cardigan Bay.

Sorting Time

The time it took to sort each pot (remove all species from the pot and re-bait) was analysed to investigate whether there would be any time saved by using pots with an escape hatch. The results show that there is a significant difference in sorting time between the pots with no escape hatch and the pots with an escape hatch. It took 1.3 times longer to sort the pots with no escape hatch. There

was no significant difference in sorting time between the pots with small and large escape hatches. Further analysis will be conducted into the implications of this result.

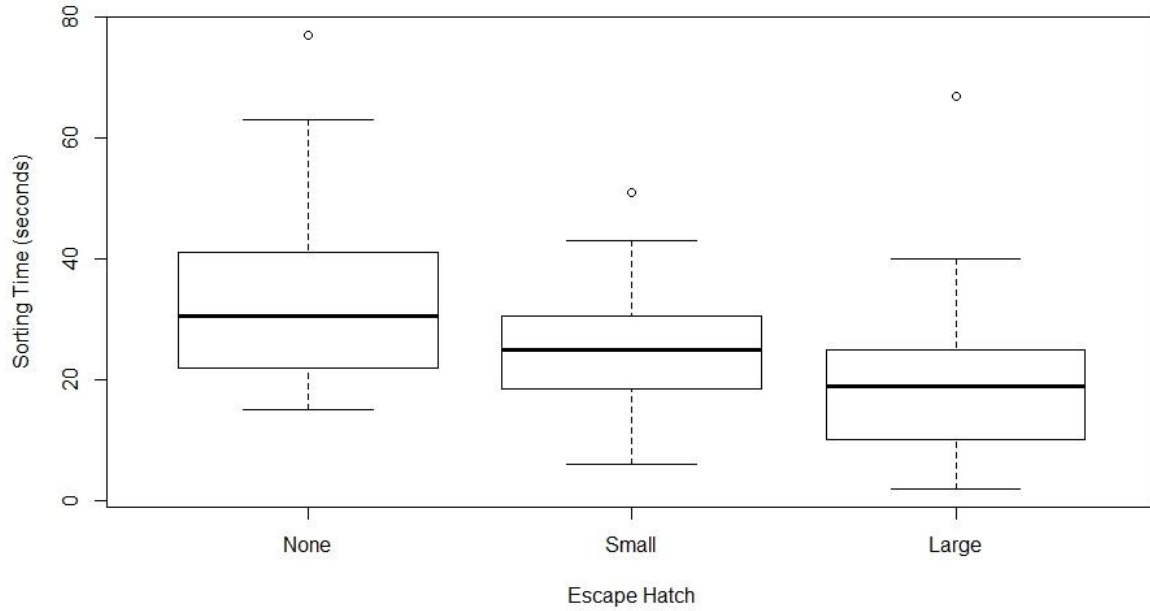


Figure 3: Fisher sorting time per pot (in seconds) for 144 pots with three types of escape hatches in Cardigan Bay.