HAV–LIV–MILJØ

FANGSTSEKSJONEN
SENTER FOR MARINE RESSURSER

TOKTRAPPORT

Fartøy	F/F Fangst
Toktnummer	2002 509
Prosjekttittel	Seleksjon – Konge krabbe
Delprosjektnr.	060207
Avgangsdato og sted	05/08/2002 – Bugøynes
Ankomststed og dato	16/08/2002 – Bugøynes
Personell	(toktleder, øvrig personell, instrument), Steinar Olsen, Svein Floen Leif Nøttestad , Hallvard Godøy, Stian Stiansen, Gjermund Langedal (Fisk. Dir.)
Formål: Studere kongekrabbens atferd overfor teiner med seleksjonsringer	
Redskaper (Type, spesifikasjoner, nødv. detaljer) Teiner	
Øvrig utstyr (Kamera, akustikk, m.m.m.) U.V Kamera, observasjonspod	
Metode (hvordan er undersøkelsen utført) Atferdsstudier – innledende fiskeforsøk	
Resultater (kort oversikt over foreløpige resultater) Gjennom atferdsstudiene så en at den mindre kongekrabben lett gikk ut gjennom seleksjonsringene som var festet langs en side på teina. Også innledende fiskeforsøk viste at mesteparten av småkrabben ble sortert ut ved hjelp av selsksjonsringer. Dette er viktig å få til da opptil 80 – 90 % av krabbefangsten i ordinære teiner kastes på sjøen igjen. Slik fiskeriet nå er er det bare hannkrabben betydelig over minstemålet som leveres. Se også HI's hjemmeside.	

Prosjektleder, toktleder: Dag Furevik

TOKTRAPPORT / SURVEY REPORT

Use of escape rings to reduce the by-catch of under-sized red king crab (*Paralithodes camschaticus*) in baited traps.

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SUMMARY

A major challenge in the Norwegian commercial fishery for red king crab (*Paralithodes camschaticus*) is to avoid catching under-sized individuals in the baited traps. The majority of the crabs caught, is of no value for the fishermen and also below legal catching size of 150 mm (carapax-length). There is therefore a growing interest to find solutions to exclude small crabs from the catches and thereby reduce the mortality and stress of under-sized crabs, as well as reduce the handling time for the fishermen. A pilot study was conducted in Bugøyfjord, northern Norway, in August 2002. The aim was to study the effect of circular escape openings in the lower panel of the traps. Paired comparisons between standard traps without selection rings and traps equipped with 160 and 200 mm diameter rings were performed repeatedly. The results clearly showed that significantly larger crabs (carapax length=156 mm) were caught in traps with selection rings compared to standard traps (carapax length=124 mm). Significantly fewer individuals, especially females, were caught in the traps with selection-rings compared to standard traps. Additionally, traps with 200 mm rings caught crabs about 23 mm larger (168 mm) than traps with 160 mm rings (145 mm). We applied an underwater rig with a light sensitive underwater-camera to observe and record the dynamics of enter/escape rates in the trap. Detailed behavioural studies show how smaller crabs manage to escape through the escape openings after being caught in the traps, and the time they used to escape.

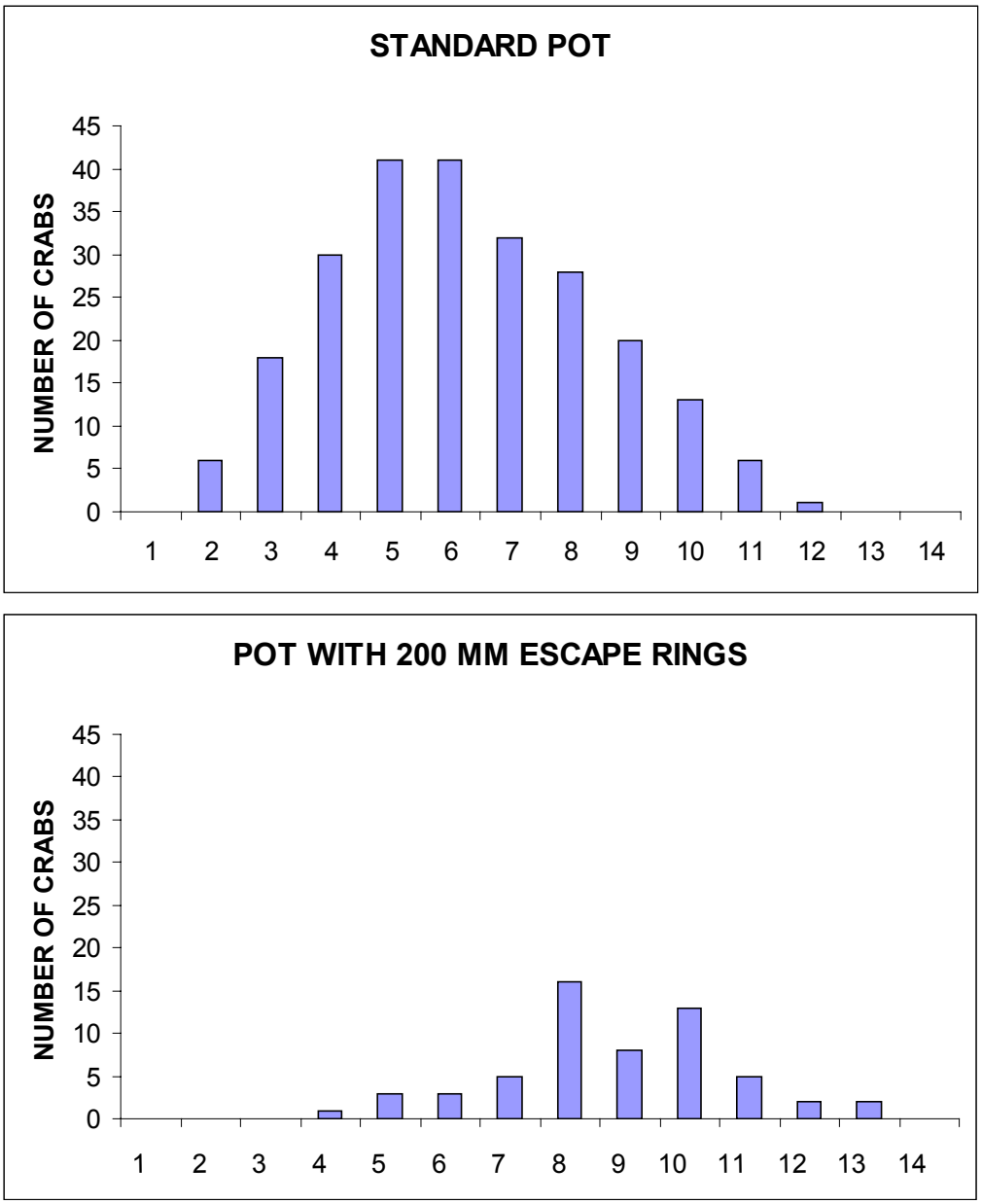
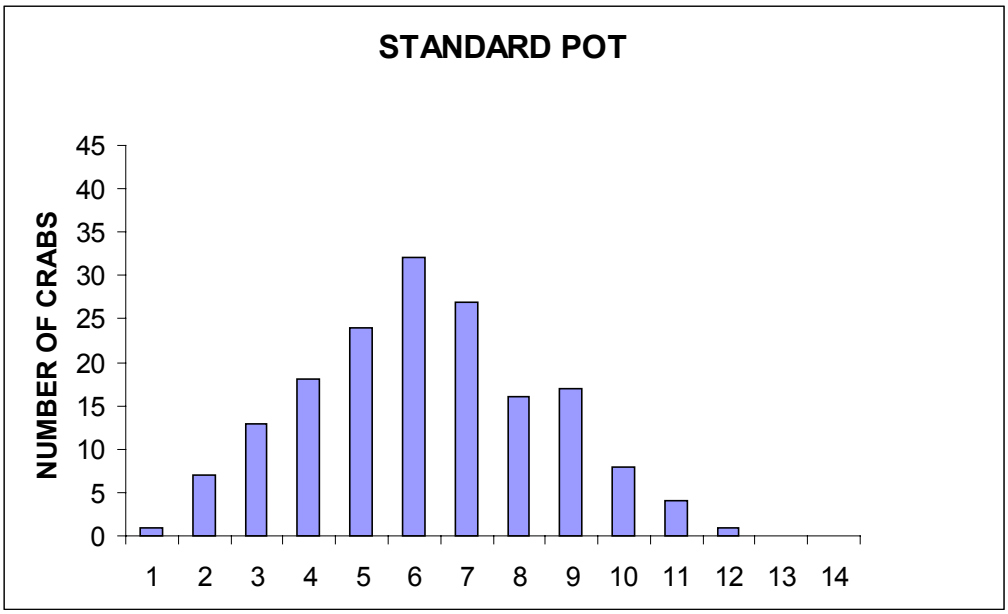


Figure 1. Note the differences in size distribution on the x-axis (1-14 = 100-140 mm carapax length of red king crab) between pots with escape rings and pots without escape rings. When we introduced the 200 mm escape rings the smaller individuals walked out of the rings, while the larger ones could not walk through the opening. Simple, and it works.



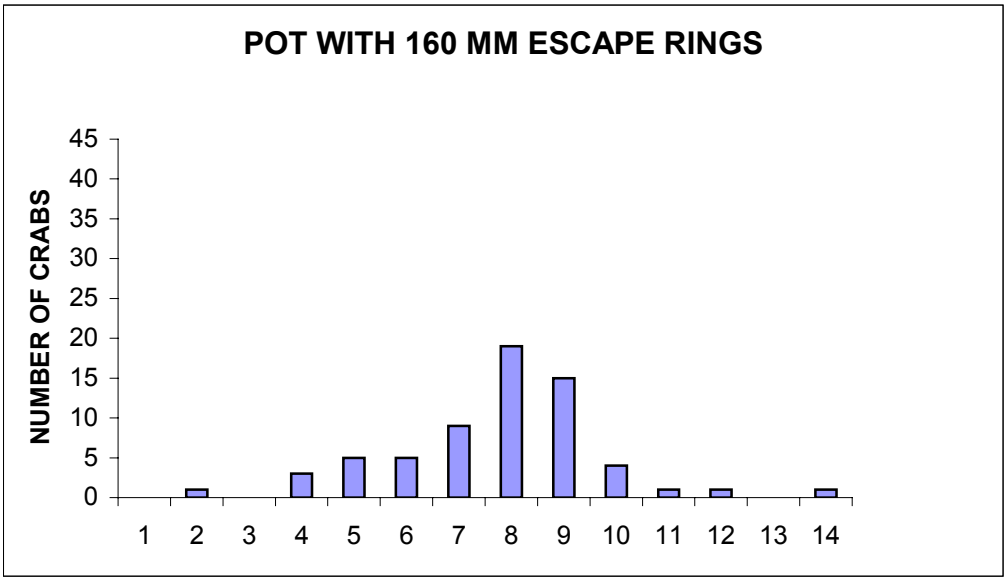


Figure 2. Note the differences in size distribution on the x-axis (1-14 = 100-140 mm carapax length of red king crab) between pots with escape rings and pots without escape rings. When we introduced the 160 mm escape rings the smaller individuals easily walked out of the rings, while the larger ones could not walk through the opening. Simple, and it still works.