

京都府沖合における底曳網によるズワイガニ水ガニの入網数と  
リリース直後の生残率

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日水誌, 77 : 372-380 (2011)

**Catch of soft-shelled male snow crab *Chionoecetes opilio* by Danish seiners in the waters off Kyoto Prefecture and their survival ratio after release at sea**

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This paper describes the estimation of catch in number of soft-shelled males *Chionoecetes opilio* caught by commercial Danish seiners and their survival ratio just after release at sea during snow crab fishing season (Nov.-Mar.). Soft-shelled males are sexually non-functional with low commercial value. Soft-shelled males caught by Danish seine were put in experimental traps, and soaked in the fishing ground for about six hours, then retrieved to the research vessel for observation on their survival/mortality. Mean total catch in number of soft-shelled males was estimated at 168,400 individuals in the waters off Kyoto Prefecture based on the fishermen's log-books received in 2006-2008. The estimated number of soft-shelled males is approximately 1.7 times higher compared to that of hard-shelled males. The survival ratio of soft-shelled males released was estimated at 14.8-95.9% for small size (90-109 mm CW), 5.0-89.8% for medium size (110-129 mm CW), and 0-62.5% for large size ( $\geq 130$  mm CW). If landings of soft-shelled males were prohibited, the mean survival rate during soft-shelled male fishing season (Jan.-Mar.) would be as high as 83.6%. This suggested that the protection of soft-shelled males leads to an increased abundance of hard-shelled males resulting in a higher economic benefit.

(京都府農林水産技術センター海洋センター業績 No.165)