Hathaichanok Soasung 2009: Spatial and Temporal Variations in Relative Abundance and in Size of Individuals of Blue Swimming Crab (*Portunus pelagicus* Lin) from a Small-scale Fishery and Their Management Implications. Master of Science (Fishery Management), Major Field: Fishery Management, Department of Fishery Management. Thesis Advisor: Assistant Professor Jiraporn Trisak, Ph.D. 61 pages.

This study examines variations in relative abundance measured in terms of catch per unit of effort (CPUE) and in size of individuals of Blue Swimming crab (*Portunus pelagicus* Lin) using the data and information from a small-scale blue swimming crab fishery in Bang Phra Subdistrict, Chonburi province. The fishery typically employs crab traps and crab gill nets in four fishing grounds, Bangsean Bay, Siracha Bay, Udom Bay and Banglamung Bay. The results revealed spatial and temporal variations in both CPUE and size of the individuals. It was implied that the variation in the relative abundance was induced by the natural changes in numbers of individuals in the population and in size of the individuals. The highest abundance both for the fishing grounds nearshore (gill net fishing) and offshore (trap fishing) was found in the cool season. The lowest abundance was found in the summer for the fishing grounds nearshore and in the rainy season for the fishing grounds offshore. Larger crabs were mostly found in the summer while most of small crabs highly distributed in the rainy season for both fishing grounds nearshore and offshore. Seasonal variation in the ratio of numbers of fishing trip employing trap to those employing gill net indicates that the fishers switched between the two gears consistently to the changes of population abundance.

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