

Variability in egg quality for eastern Bering Sea snow crab, *Chionoecetes opilio*.

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Understanding variability in population reproductive potential is important for management of exploited crab stocks. For the snow crab, *Chionoecetes opilio*, a commercially important species in the eastern Bering Sea, reproductive potential can be measured by the number of viable eggs carried by females. Population egg production is known to vary with female abundance and characteristics of individual females such as size and reproductive status. However, in addition to the number of eggs carried by mature females, reproductive potential may also vary if females produce eggs of differing quality. To assess possible trade-offs between egg number and egg quality, indicators of egg quality were evaluated among three groups of eastern Bering Sea snow crab of differing age relative to the terminal molt to maturity. Females collected near St. Matthew Island in August 2007 were classified by condition of the exoskeleton as newshell primiparous, oldshell multiparous, or very oldshell multiparous. Primiparous females carrying their first clutch of ontogeny had similar egg energetic content, mean egg diameter, mean egg weight, and number of eggs per unit size as oldshell or very oldshell multiparous females. Several very oldshell females had relatively lower fecundity and had non-developing ovaries indicating possible senescence. These results support the conclusion that reductions in reproductive potential for female snow crab are likely to be observed as lower individual fecundity rather than a decrease in egg quality.