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Depredation of island-nesting seabirds by introduced vertebrates is a conservation problem world wide, particularly as marine birds have generally evolved in the absence of terrestrial predators. In contrast, at island colonies where seabirds have co-evolved with *native* predators, the evolution of defensive behaviours is expected. For breeding seabirds, the primary predation risk is often incurred by their eggs and chicks. For my thesis research, I studied egg predation and parental incubation behaviour in Rhinoceros Auklet (*Cerorhinca monocerata*) at the seabird colony on Triangle Island, British Columbia (51°52'N, 129°05'W). Native deer mice (*Peromyscus keeni*) opened and ate the eggs in up to 34% of monitored auklet burrows. I used stable isotope analyses of mice and their potential prey items to determine the role of seabird eggs in rodent diets. $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values of mouse liver and muscle tissues suggested that for Triangle Island *Peromyscus*, seabird eggs are a primary source of protein during spring and summer. Although mice can only take eggs when incubating birds are absent, parents often took lengthy recesses (>18 h) from their nests. Incidents of parental egg neglect were greater in 1998, a year of poor at-sea food availability, than they were in 1999, indicating that lower food supply may lead to more frequent neglect. Incubation behaviour by breeding Rhinoceros Auklets did not appear to take the risk of egg predation into account, supporting a life history interpretation. In both years of my study, incidents of egg neglect were more frequent early in incubation. previous research suggests that this pattern tracks the more stringent developmental requirements of older embryos. I experimentally chilled auklet eggs for 48 h either early or late in incubation to test this hypothesis. Hatchability of experimental eggs did not appear to be affected by embryo age at date of chilling. Observed nest attentiveness patterns in Rhinoceros Auklets are thus more likely explained by increasing parental investment in the embryo over time, or as a response to the loss of adult body reserves during courtship and egg formation.