



Predation on Common Eider Ducklings on Great Duck Island, ME



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Introduction

The Common Eider (*Somateria mollissima*), a large diving sea duck commonly found in the Gulf of Maine, nests on coastal islands with Herring Gulls (*Larus argentatus*) and Great Black-Backed Gulls (*Larus marinus*), both predators of eggs and ducklings. Many studies researching predation pressures on Common Eiders by gulls where both species occur have found Great Black-Backed Gulls to be the main source of mortality for ducklings, one figure puts it as high as 90% of duckling mortality (Mawhinney, 1999). Since the 1920s, Great Black-Backed Gulls have increased in frequency in the Gulf of Maine, raising concerns over possible effects on Common Eider populations from over predation. In order to assess whether predation rates on ducklings by Great Black-Backed Gulls are affected by human disturbances, particularly researcher created disturbance, we observed a Common Eider nursery from a vantage point that nullified observer effects.

Methods

We observed one crèche of 11 ducklings and two adult females for a total of 73 hours over 32 days. Females were distinguished by plumage; one female had very light plumage with a thick speculum and the second female had very dark plumage with no discernable speculum.



Photo by John Anderson

Observations were made from the lighthouse on the south end of the island using a pair of 8x42 binoculars and a spotting scope.

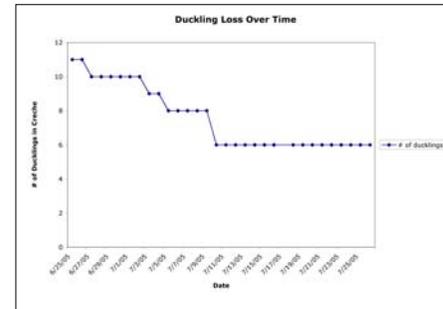


Photo by John Anderson

Results

Of the original 11 ducklings first observed on June 25, 2005 six survived to the end of the study. During the 73 hours of observation, we observed six predation attempts and one successful predation of a duckling by a Great Black-Backed Gull. The other four ducklings were unaccounted for. While a Great Black-backed Gull was the only successful predator observed we also observed an attempt by a Common Raven (*Corvus corvax*). Females regularly nipped at Herring Gulls that came too close.

Results cont.



Conclusion

We observed 55% survival for the crèche, much higher than expected based on previous studies. One reason for this may simply be the fitness of the mothers, who were skilled in driving away attacking gulls. Another reason may be the absence of researcher disturbance on the crèche. If the latter is the case than it has some serious management implications. If disturbance has a profound effect on the survival of Common Eider ducklings than managers need to keep that in mind for both research conduct and recreational activities around and on breeding islands. More study is necessary to fully understand the possible effects of human disturbance on duckling mortality.

Acknowledgements

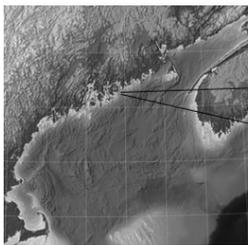
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References

Mawhinney, K. and A.W. Diamond. 1999. Using radio-transmitters to improve estimates of gull predation on Common Eider ducklings. *The Condor* 101: 824-831.

Great Duck Island

Great Duck Island is a 91-ha island in the Gulf of Maine. Eider females use the intertidal zone on the southern end of the island as a duckling nursery. Great Duck Island is located at 44° 09' N, 68° 15' W.



Map from Gulf of Maine Aquarium

