

## **LARGE-SCALE OCEANIC FORCES CONTROLLING THE ATLANTIC PUFFIN IN S.-ICELAND**

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Since 1875 Atlantic Puffins (*Fratercula arctica*) have been hunted in Iceland with a pole net, a technique where mainly nonbreeders (2-4yr) are caught, sparing breeding birds (>5yr). Breeding failure in the Vestmannaeyjar archipelago has been evident 2005-7, apparently due to food shortage and annual puffin harvest has also decreased. In this study, records from six islands were used, with the longest time series since 1943. Past decades oscillations in the catch records are evident. Inter-annual variation in puffin harvest is high and it is hypothesized that a local prevalence by nonbreeders is in direct relation to local food availability around the Islands. This is based on the observation that puffin harvest is highly correlated to fledglings' mean body mass. A correlation was found between the Sub-polar gyre index and puffin catch index 3-5 years later. Thus, indicating an effect of oceanographic dynamics on the reproductive output or the effect of winter survival in the western Atlantic which are later expressed in number of 2-4yr old puffins present near the natal colonies.