Dr. Ian Stirling, Adjunct Professor in the Department of Biological Sciences

Selected Journal Publications

Stirling, I., Regehr, E.V., Spencer, C., Burns, L.E., and K.L. Laidre. 2022. Using visual observations to compare the behavior of previously immobilized and non-immobilized wild polar bears. Arctic. 75:398–412. https://doi.org/10.14430/arctic76118

Stirling, I., Laidre, K.L., and Born, E.W. 2021. Do Wild Polar Bears (Ursus maritimus) Use Tools When Hunting Walruses (Odobenus rosmarus)? Arctic 74:75–187.

Harwood, L.A., Smith, T.G., Alikamik, J., Alikamik, E., Lea, E.V., Stirling, I., Wright, H., Melling H., and Zhu, Z. 2020. Long-term, Harvest-based Monitoring of Ringed Seal Body Condition and Reproduction in Canada's Western Arctic: An Update through 2019. Arctic 73:206–220. https://doi.org/10.14430/arctic70428

Laidre, K.L. and Stirling, I. 2020. Grounded icebergs as maternity denning habitat for polar bears (Ursus maritimus) in North and Northeast Greenland. Polar Biology 43:937–943. https://doi.org/10.1007/s00300-020-02695-2

Richardson, E.S., Corey Davis, C., Stirling, I., Derocher, A.E., Lunn, N.J., and Malenfant, R.M. 2020. Variance in lifetime reproductive success of male polar bears. Behavioral Ecology, 31:1224–1232. doi:10.1093/beheco/araa074.

Stirling. I., Laidre, K.L., Derocher, A.E., and van Meurs, R. 2020. The ecological and behavioral significance of short-term food caching in polar bears (Ursus maritimus). Frontiers in Ecology and Environment 16: 515-524 doi.org/10.1002/fee.1963

Biddlecombe, B., Derocher, A.E., Richardson, E., and Stirling, I. Behaviour and characteristics of mating polar bears (Ursus maritimus) in the Beaufort Sea, Canada. Polar Biology /doi.org/10.1007/s00300-019-02485-5.

Smith, T.G. and Stirling, I. 2019. Predation of harp seals, Pagophilus groenlandicus, by polar bears, Ursus maritimus, in Svalbard. Arctic 72:197-202. doi.org/10.1007/s00300-019-02485-5.

Stirling. I., Laidre, K.L., Derocher, A.E., and van Meurs, R. 2019. The ecological and behavioral significance of short-term food caching in polar bears (Ursus maritimus). Arctic Science, doi.org/10.1139/as-2019-0008.

Cahill,J.A., Heintzman, P.D., Harris, K., Teasdale,M.D., Kap, J., Sores, A.E,R., Stirling, I., Bradley, D., Edwards, C.J., Graim, K., Kisleika, A.A., Malev, A.V., Monaghan, N., Green, R.E., and Shapiro, B. 2018. Genomic Evidence of Widespread Admixture from Polar Bears into Brown Bears during the Last Ice Age. Molecular Biology and Evolution. 35:1120–1129.

Laidre, K., Stirling, I., Estes, J.A., Kochnev, A., and Roberts, J. 2018. Historical and potential future importance of large whales as food for polar bears. Frontiers in Ecology and the Environment. 16:515-524.

Cahill, J.A., Heintzman, P.D., Harris, K., Teasdale,M.D., Kap, J., Sores, A.E,R., Stirling, I., Bradley, D., Edwards, C.J., Graim, K., Kisleika, A.A., Malev, A.V., Monaghan, N.,Green, R.E., and Shapiro, B. 2018. Genomic Evidence of Widespread Admixture from Polar Bears into Brown Bears during the Last Ice Age. Molecular Biology and Evolution. 35:1120–1129.

Harvey, J.A., Van den Berg, Ellers, J., Kampen, R., Crowther, T.W., Rosessingh, P. Vergeggen, B., Nuijten, Lewandowskjy, S., Stirling, I., Balgopal, M., Amstrup, S.C., Post, E., and Mann, 2018. Internet blogs, polar bears, and climate-change denial by proxy. BioScience 68:281-287.

Stirling, I., Spencer, C., Andriashek, D. 2016. Behavior and activity budgets of wild breeding polar bears *(Ursus maritimus)* Marine Mammal Science 32:13-37.

Stirling, I., and Derocher, A.E. 2012. Effects of Climate Warming on Polar Bears: A Review of the Evidence. (invited review) Global Climate Biology **18**:2694-2706.

Stirling, I., McDonald, T.L., Richardson, E.S., Regehr, E.V., and Amstrup, S.C. 2011. Polar bear population status in the Northern Beaufort Sea, Canada, 1971–2006. Ecological Applications **21**:859–876.

Stirling, I., and Ross, J.E. 2011. Observations of cannibalism by polar bears (*Ursus maritimus*) on summer and autumn sea ice at Svalbard, Norway . Arctic **64:**478-482.

Hobson, K.A., Stirling, I., and Andriashek, D.S. Isotopic homogeneity of breath CO_2 from fasting and berry-eating polar bears: Implications for tracing reliance on terrestrial foods in a changing Arctic. Canadian Journal of Zoology **87**:50-55.

Davis, C.S., Stirling, I., Strobeck, C., and Coltman, D. 2008. Population structure of ice-breeding seals. Molecular Ecology **17**:3078–3094.

Thiemann, G.W., Iverson, S.J., and Stirling, I. Polar bear diets and arctic marine food webs: insights from fatty acid analysis. Ecological Monographs, **78**:591–613.

Laidre, K.L., Stirling, I., Lowry, L.F., Wiig, Ø., Heide-Jørgensen, M-P., and Ferguson, S.H. 2008. Quantifying the sensitivity of arctic marine mammals to climate-induced habitat change. Ecological Applications 18 Supplement: S97–S125.

Regehr, E.V., Lunn, N.J., Amstrup, S.C., Stirling, I. Effects of earlier sea ice breakup on survival and population size of polar bears in western Hudson Bay. Journal of Wildlife Management **71**:2673-2683.

Stirling, I., and C.L. Parkinson. 2006. Possible Effects of Climate Warming on Selected Populations of Polar Bears (Ursus maritimus) in the Canadian Arctic. Arctic **59**(3):261-275.

Stirling, I. 2002. Polar Bears and Seals in the Eastern Beaufort Sea and Amundsen Gulf: A Synthesis of Population Trends and Ecological Relationships over Three Decades. Arctic **55**, Supplement 1:59-76.

Stirling, I. and J.A. Thomas. 2001. Relationships between underwater vocalizations and mating systems in phocid seals. Aquatic Mammals **29**:247-246.

Stirling, I., N.J. Lunn and J. Iacozza. 1999. Long-term trends in the population ecology of polar bears in western Hudson Bay in relation to climatic change. Arctic **52**:294-306.

Stirling, I. and Øritsland, N.A. 1995. Relationships between estimates of ringed seal and polar bear populations in the Canadian Arctic. Canadian Journal of Fisheries and Aquatic Sciences **52**:2594-2612.