

Genetic studies of bowhead whales.

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Cooperators:

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Goals:

Investigate levels of genetic diversity and population structure in bowhead whales.

Recent Publications:

Jorde, P. E., T. Schweder, J. W. Bickham, G. H. Givens, R. Suydam, D. Hunter, and N. C. Stenseth. 2007. Detecting genetic structure in migrating bowhead whales off the coast of Barrow, Alaska. *Molecular Ecology* doi: 10.1111/j.1365-294X.2007.03268.x.

Statement of Problem:

The Bering-Chukchi-Beaufort Seas stock of bowhead whales is the subject of an aboriginal hunt by Alaskan Eskimos. A quota for this hunt is established by the International Whaling Commission (IWC). Presently the population numbers about 10,500 whales and is increasing about 3% per year. The harvest quota is set about 40 whales per year. Our genetics studies investigate possible sub-stock structure in this population, as well as the effects of the population bottleneck caused by the historical Yankee commercial whaling that indeed in the early 20th Century.

Current Activities:

We recently completed a study of approximately 400 whales using 33 microsatellite loci and presented the results to the IWC meeting in Anchorage in 2007. The data show little convincing evidence of sub-stock structure within the BCBS and the best population models show no significant risk to the population of the current strike-limit imposed by the IWC. It is apparently a genetically variable and healthy population. Our future studies will include continuing to add to the database using animals harvested at several Alaskan villages and in Russia, and to explore the use of the Y chromosomal genes for investigating genetic variability within this species.