Dear X

We have a paper coming out in Mol Ecol detailing the application of Approximate Bayesian Computation (ABC) for detecting a recent population bottleneck in the Antarctic fur seal, a species known to have been heavily exploited by commercial sealers in the 18th and 19th Centuries. We tested support for a simplified bottleneck model, with prior distributions for bottleneck size and timing broadly bracketed around known values, relative to a model of constant population size. This appears to have worked surprisingly well, not only providing good support for a bottleneck having occurred, but also generating estimates of bottleneck population size and timing that are remarkably consistent with the known hunting history.

We would now be interested in exploring how well this approach performs more generally across the pinnipedia. The general idea would be to assemble previously published microsatellite datasets for as many different pinniped species as possible and to test these within the same analytical framework (ie. determine relative support for two models, a generalized bottleneck model and one of constant population size). We would then look to see whether the degree of support for the former scenario correlates with what is known about each species' exploitation history (ie. heavily hunted, moderately hunted, not hunted). From a brief literature review, it appears that microsatellite datasets have already been published for ~25 different pinniped species.

We read you paper 'X' and were wondering if you would be willing to share your raw data with us. Naturally, the data would be used only for the purpose of the proposed analysis and would not be passed onto any third parties. We are not yet sure how well the proposed analysis will work, as the key thing will be generalize the bottleneck model to as many species as possible. However, if we generate meaningful results and decide to write them up, all of the contributors would be given due acknowledgements and their original paper cited.

Although we can do internet searches, it would also be useful to have your best estimates (or 'gut feelings') for the following: historical population size (i.e. pre 18th century), bottleneck population size (if the species was heavily hunted, how small is the population known to gave gone) and contemporary population size.

Hope to hear from you soon,

With best wishes,

Joe Hoffman and Caleb Philips