

4155/5155 Homework 3

1. SMOG 6.23 (a)
2. SMOG 6.23 (b)

Siniff and Skoog (1964) is a nicely detailed example of stratified random sampling from back in the day when calculations had to be done by hand.

1. Using data from their Table Two, use my stratified sampling estimation tool (or by hand or...) to see how close you can come to their 95% CI for the total number of caribou. Your answers won't match up perfectly due to their rounding of values in the table.
2. Zero points (but great satisfaction) bonus: Using their numbers, can you deduce what degrees of freedom they used in creating their C.I.?
3. The authors declare in the title that they conducted a census of the caribou population. Agree or disagree, and discuss.
4. The left-hand column of page 395 contains their explanation of various aspects of stratified sampling. There are a handful of points they make with which a contemporary statistician (such as yourself) might quibble. Identify two, and write a critical¹ comment for each.

Reference

Title: Aerial Censusing of Caribou Using Stratified Random Sampling

Authors: Donald B. Siniff, Ronald O. Skoog

From: The Journal of Wildlife Management, Vol. 28, Issue 2, pp 391-401; 1964.

¹ By critical comment, I mean an attempt to constructively correct a perceived error or lack of clarity.