**Coding exercise, week 3: Known-fates models**

**This week’s challenge:**

Using the Rmark user guides: <http://www.phidot.org/software/mark/rmark/ABeginnersGuidetoRMark.pdf>, and <http://www.phidot.org/software/mark/docs/book/pdf/app_3.pdf>

Along with the Black Duck data set that is built into MARK/RMark: (<http://www.phidot.org/software/mark/docs/book/pdf/chap3.pdf>), and

Conroy, Michael J., Gary R. Costanzo, and Daniel B. Stotts. "Winter survival of female American black ducks on the Atlantic coast." *The Journal of Wildlife Management* (1989): 99-109. (http://www.jstor.org/stable/3801314)

1. Figure out how to bootstrap the mean survival and confidence intervals for the Si ~ Weight model.
2. If you finish this, scroll down in the following code (<https://sites.google.com/site/cmrsoftware/lecture-lab-schedule/9--known-fates-analysis/implementation-in-rmark-and-mark>) and learn and practice how to implement predicting Si across a range of covariates. You could use the Weight model, or another model of interest.
3. More details on bootstrapping can be found in the code. There are also numerous online tutorials.