# Exercise – Nonlinear Models

Answer the following questions with R code by creating (*and editing if you make a mistake*) an R script and iteratively running the code in RStudio.

1. Load the data in the **LakeTroutALTER.csv** file into a data frame in R.
2. Compute point estimates for the three parameters of a "traditional" von Bertalanffy growth model.
3. Compute confidence intervals, using both the profile-likelihood and bootstrap methods, for $L_\infty$ and $K$. Comment on the difference in intervals between the two methods.
4. Construct a plot of length versus age with the best-fit von Bertalanffy growth model superimposed.
5. Predict the length, with 95% confidence interval, of an age-20 lake trout.
6. *If time permits ...* repeat the analysis above but using the Gallucci and Quinn parameterization of the VBGM.