

Methods in Experimental Ecology II (PCB 6468)

Extra Credit Assignment

Due January 18, 2021



The purpose of this exercise is to review the academic literature in your field and find out what statistical methods are used more frequently according to time of publication and journal impact factor (JIF)*.

To complete your exercise, enter your results in the group excel file (notice there is 4 tabs) and email us your references (no need for proper formatting).

- 1 Select two academic journals that you are interested in. One must have JIF > 3 and the other JIF < 2
- 2 In each journal select 10 articles published between 1995 and 2000, and another 10 published between 2010 and 2015 (each of you will review a total of **40 papers** *papers must include some type of statistical analysis!*)
- 3 Find what type of statistical analysis was performed.
- 4 Search for the following words** and tally their occurrence across papers (only once per paper):

p-value (for the null hypothesis)
t-test
ANOVA (analysis of variance)
ANCOVA (analysis of covariance)
AIC

GLM (generalized linear models)
Mixed model(s)
Model selection
Linear regression
Bayesian (analysis)

- 5 Keep a list of the papers you used from each of the journals
- 6 Enter your tally in the appropriate places of the group excel book. Notice there are 4 separate tabs (one for each combination of date and JIF).

*We recommend that you use **Web of Science**, both to search for impact factors and for the articles. Use the JIF for 2014 as your reference to select journals

**Feel free to include any others terms/concepts that you consider important.

***Because the papers searched by each person must be different, we suggest you simply make sure not to search from the same journals as any of your classmates. Once you selected a journal, enter it in the group excel file to claim it!