Review of some general Concepts

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1 General objective

- In this section, we will review:

– basic probability concepts and various probability distributions.

– use(s) of Bayes inference in Ecology

– some critics ot the use of **p**

1.1 Key Concepts

- Probability basics
- Common probability distributions (binomial, dirichlet, gamma, exponential, log-normal)
- Time to say good-bye to **p**
- Bayes in Ecology

1.2 Activities

- Review: Unit 3. Bodine et al and the ASA statement.
- Read: Bayesian inference in ecology. Ecology Letters (2004) 7: 509–520 doi: 10.1111/j.1461-0248.2004.00603.x
- Find a paper in your area of expertise and revise the use of p, write down a short analysis (max 1000 words) of the possible ways to solve the problems you might have detected.

1.3 Readings

1.3.1 Basic readings

- **Unit 3. Bodine et al** Read Online
- **Ellison. 2004**. Bayesian inference in ecology. Ecology Letters. 7: 509–520 doi: 10.1111/j.1461-0248.2004.00603.x
- **ASA statement** Read Online

1.3.2 Should read

- **Chapter 5. Sokal & Rohlf**
- **Chapter 1. Anderson's perspective on Science and Experimental design** Read Online
- **[Storopoli (2022). Bayesian Statistics: a graduate course.]**(https://github.com/storopoli/Bayesian Statistics/tree/main)
- van de Schoot, R., Depaoli, S., King, R. et al. Bayesian statistics and modelling. Nat Rev Methods Primers 1, 1 (2021). https://doi.org/10.1038/s43586-020-00001-2