

# Chapter 6, Linear Normal Models

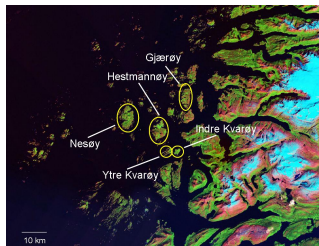
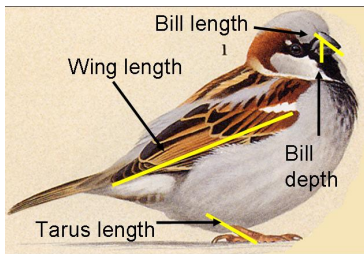
## Properties:

- As GLM
- Maximum Likelihood Estimate (MLE)
- Least Square Estimate
- Deviance
- Hypothesis testing

## Models:

- Multiple linear regression
  - Outlier detection / influential observation
  - Collinearity / multicollinearity
- Analysis of variance (ANOVA)
  - One factor ANOVA
  - Two factor ANOVA
- Analysis of covariance
- General linear model

# House sparrows questions



- 1 Are birds heavier in summer than in winter?
- 2 Are birds relatively heavier on the outer islands in summer than on the inner islands?
- 3 Body mass modeled with tarsus length, wing length, bill length and bill depth.
- 4 Body mass modeled with tarsus length, wing length, bill length, bill depth and season.
- 5 Are birds heavier on the outer islands when we account for size (tarsus, wing length, etc.) ?