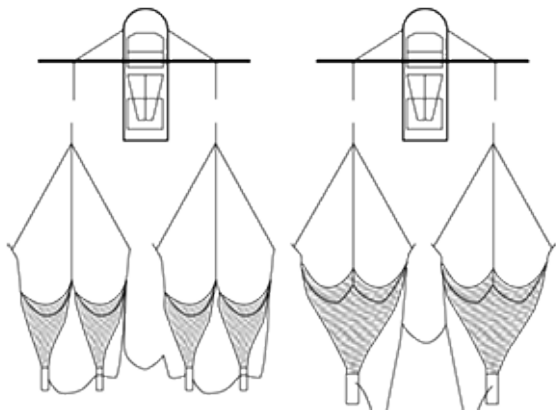
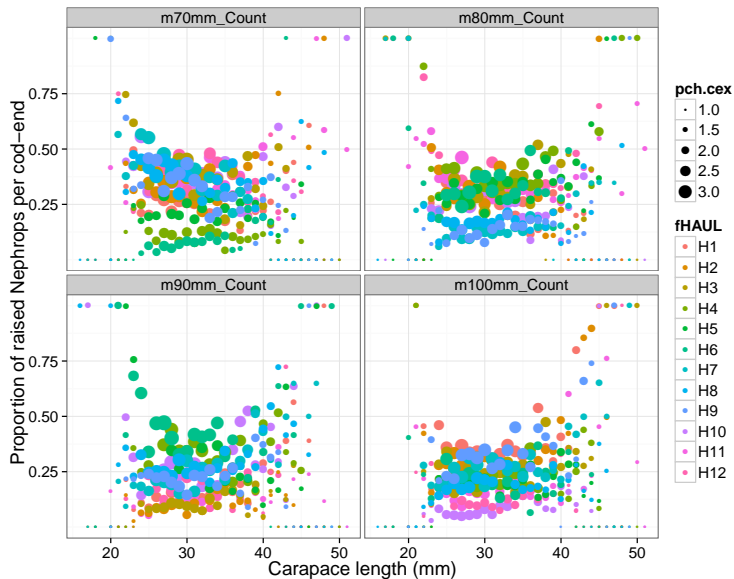


A fine mesh



The data



The model

$$P(Y_i = j) = \frac{e^{\mathbf{X}_i \boldsymbol{\beta}_j + \mathbf{u}_i}}{\sum_{k=1}^4 e^{\mathbf{X}_i \boldsymbol{\beta}_k + \mathbf{u}_i}}$$

$$\mathbf{u}_{*,\{2,3,4\}} \sim \mathbf{N}_3(\mathbf{0}, \boldsymbol{\Sigma})$$

Setting: $\boldsymbol{\beta}_{*,1} = \mathbf{0}$, $\mathbf{u}_{*,1} = 0$