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Q1 (2 pts.): For both models (abundance and presence/absence) identify:

a) The predictor variable(s).
b) The data type/scale used for the predictor variable.

Answer: For the model 1 using abundance of Brown creeper, the predictor variable is "extend of late-successional forest", and the predictor is a discrete numeric variable.

For the model 2 using the occurrence of Brown creeper, in this case the predictor variable is the "total basal area of trees", and the predictor is a continuous numeric variable.

Q2 (2 pts.): For both models (abundance and presence/absence) identify:

a) The response variable.
b) The data type/scale used for the response variable.

Answer: For the model 1, the response variable is the "Brown creeper relative abundance", is a continuous numeric variable.

For the model 2, the response variable is the "Brown creeper occurrence", is a nominal numeric variable, with two level, presence = 1, and absence = 0.

Q3 (4 pts.): For both models: How did the data type or scale influence or constrain the choice of model?

Answer: When we start analysis data, we need to make the data exploration, In both model was present a scatterplot with predicted and response variable, the type and scale of the response variable is very important to start the analysis data, in fact our analysis will focus is predict the response variable. For the model 1, the response variable of relative abundance in a continuous range between 0 and 1 was important to try to fix a lineal model. And for the model two, the response variable in a nominal numeric scale was ideal to fix a logistic model with a distribution error = logit. But we have to remember to select any model we need make a selection model using so tool as Akaike Information Criteria (AIC), and the model that we thinking in the data exploration could fix well or do not, we will need to try several possible model to select the more adequate to predict out response variable.

Q4 (1 pt.): What are the pros and cons of the Ricker model? What are the pros and cons of the quadratic model?

Answer: Ricker model: Pros: 1) Could be using as mechanistic interpretation, as well as phenomenological model for environmental variables that start at zero, increase to a peak, and decrease gradually back to zero. 2) Can be apply in fishery science, biological sciences, human population modeling, and any field of science that involves a population species.

Cons: 1) Derive from assuming that per capita fecundity decreases exponentially with density. 2) Is limited to study population species.

Quadratic model: Pros: 1) There are many real life situations in which the relationship between two variables is quadratic rather than linear. 2) There is a simple equation to solve any quadratic equation. 3) Could fix well, in some case better that mechanistic model. Cons: 1) We can describe the phenomenon well, but not the underlying mechanism