1. In McGarigal’s model of Brown creeper abundance explained by late-successional forest percent:
   1. The predictor variable is extent of late-successional forest percent.
   2. It is a continuous data type on a scale from 0-100%.

In McGarigal’s model of model of Brown creeper presence/absence explained by total basal area (a measure of tree cover):

1. The predictor variable is total basal area, it’s based on the total area covered by live and dead trees.
2. It is a continuous data type that ranges from 0-200.
3. In McGarigal’s model of Brown creeper abundance explained by late-successional forest percent:
   1. The response variable is Brown creeper abundance, measured in relative abundance (0-1).
   2. It is a continuous data type that ranges from 0-1.

In McGarigal’s model of model of Brown creeper presence/absence explained by total basal area (a measure of tree cover):

1. The response variable is Brown creeper occurrence.
2. It is a discrete binary data type that is either 0 or 1, absence or presence.
3. In McGarigal’s model of Brown creeper abundance explained by late-successional forest percent because the predictor and response variables are phenomenological descriptions, this then influenced the choice of the model into one that would include a stochastic component hence the not perfectly linear relationship. In McGarigal’s model of model of Brown creeper presence/absence explained by total basal area (a measure of tree cover): the binary response variable constrained the model to a logistic model that fits this type of data.
4. The pros of the Ricker Function are that it is a mechanistic model, based in theory that can describe predator prey relationships without observational data. It can also be used as a “phenomenological model for environmental variables that start at zero, increase to a peak, and decrease gradually back to zero” (McGarigal). A con of the Ricker Function is that there may be times where the pattern of data can be well described but it is not based on this underlying environmental theory, and a good fit is not possible with this model.

The pro of the Quadratic model is that it can easily explain curvilinear patterns, fit certain data better than some mechanistic models and is useful when the underlying theory, mechanisms, are unknown. A con is that it’s usage is hard to justify because it is not derived from theory according to McGarigal. The underlying mechanisms of the data is therefore unknown.