Lab.9 – Projecting biodiversity change

Project biodiversity change following a scenarios of land use change

1. ***Constructing a species-area relationship***
2. Load the moths dataset from the primer of ecology package and explain the structure of the dataset

library("primer")

data(moths)

1. Plot the number of species as a function of area in log-log scale and in linear scale. What type of SAR is this (island or nested)?
2. Fit the species-area relationship by calculating the c and z parameters. Plot the fit line in the figures.
3. Estimate the total number of moth species in USA.
4. Plot the number and the proportion of species extinctions projected as a function from area of habitat lost, with habitat lost ranging from 0 to 100ha
5. Extra credit: produce confidence intervals for the plot by bootstrap.