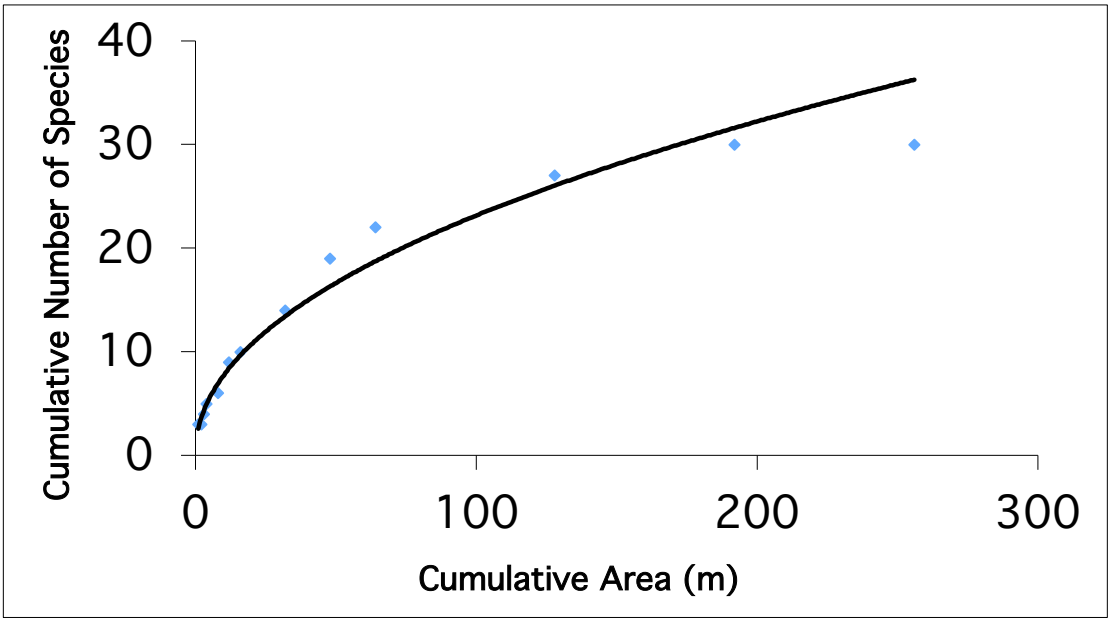
Species Area Curves

As area increases, so does the number of species. This relationship is exemplified by the species area curve. It may be used to compare species diversities of different communities. It is also used to determine the minimal plot size needed to survey a community adequately. In conservation biology, the species area curve may be used to predict the minimum area that must be preserved to protect the majority of species in a given location.



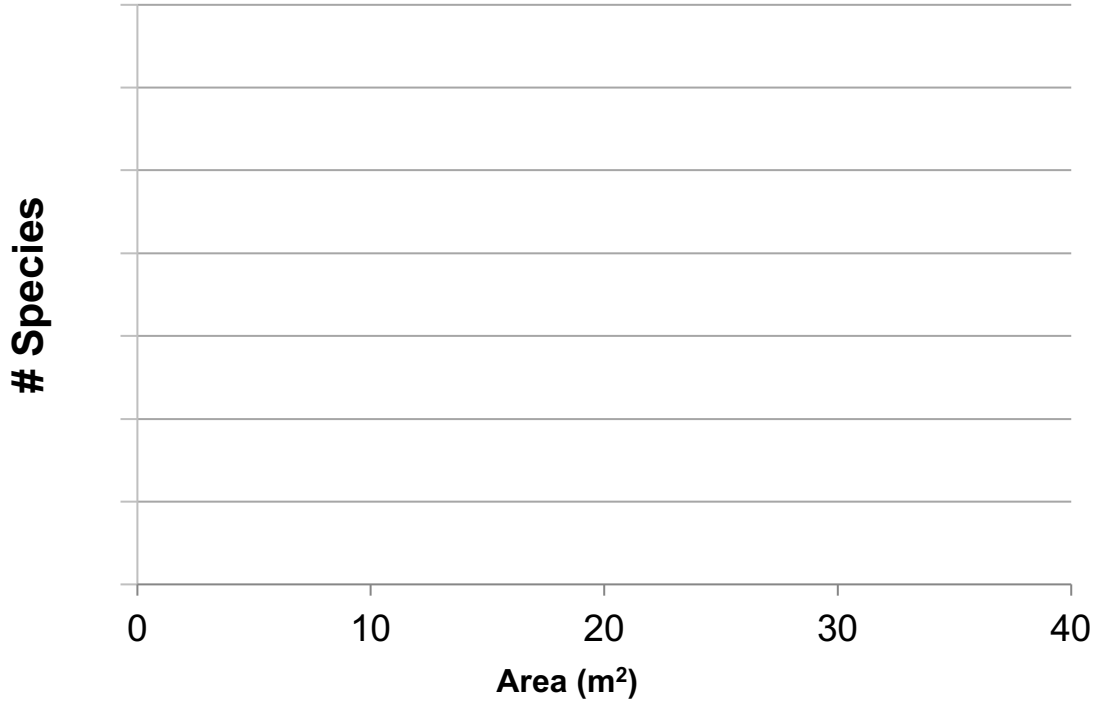
Today we will compare the species richness of two different habitats, a meadow and a goldenrod field. It is not necessary to know the actual species, but you must be able to distinguish among species.

We will use a nested plot design with each successive quadrat nested inside of a larger quadrat. Starting with plot A (the smallest plot) begin counting the number of different kinds of arthropods. You should use collecting jars to help you keep track of the diversity of species you encounter. Record the number of species on the data sheet provided

Habitat: Meadow or Goldenrod

	Plot A	Plot B	Plot C	Plot D	Plot E	Plot F
Plot Size	$1m^2$	$2m^2$	$4m^2$	$8m^2$	$16m^2$	$32m^2$
# Species						

Construct species area curves for your data, plotting the cumulative number of species on the Y-axis and the cumulative area of the plots on the X-axis.



Analysis Question:

1) In which habitat do we need to sample a greater area in order to accurately estimate species richness? Why?