## Quadrats: The Point-Intercept Method



There are a variety of sampling techniques to estimate the abundance of a particular organism in an ecosystem.

There are also many ways to use the information that the collected data gives us.

In the case of the Lowcountry Algal Monitoring Project for Students (L.A.M.P.S.) we are interested in the abundance of a particular seaweed (algae) species, <u>*Gracilaria vermiculophylla*</u>.

To determine the abundance we will be using the point-intercept method within a quadrat. <u>Basic information on quadrats</u> can be found under the student method page of our website.

Once we collect our data, we will use those numbers to calculate the percent cover of *Gracilaria* on the mudflat being observed. This will enable us to make a statement like the following, "during the winter months, \_\_\_\_% of the mudflat is covered in *Gracilaria vermiculophylla* and in the summer months \_\_\_\_% of the mudflat is covered."

Let's take a look at the quadrat below:

Instead of being concerned with the entire quadrat, we are now mainly interested with where the lines within the quadrat intersect:



Now let's practice counting with the image below. Remember, we are only counting the plants that also occur at an intersection between two of the lines within the quadrat:



The number of "hits" is 3:

\*



The algae below do not occur at an intersection, thus they do NOT count:



Continue on for a practice problem.

Using the quadrat and algae below, count the total number of intersections with algae and record it here: \_\_\_\_\_



Remember, in a real study we would sample many more times than just once, and perform statistics to describe those data.