Massachusetts Young-of-the-Year Bottom Trawl Survey

My research involved analyzing young-of-the-year data over the last 30 years, in hopes to plot the data and find some type of correlation between temperature, bottom sediments, and location. When we began the project I had to take a look at datasets along the east coast from Maine to Virginia. I had to first design a table that had similar surveys for each state. I came across the first problem when some of the data did not use the same gear and the survey was not done the same time of year. Out of all the data sets Massachusetts had the most amount of data and a small mesh was used to capture the fish.

The dataset had over 100,000 records so I had to split up the dataset to spring and fall. All the data was categorized by numbers so I had to set up a query that matched species names to species id. I came up with a detailed list of each species, which included bottom temperature, date, survey, number caught, and miscellaneous information. I had to do research on all the species from the list to find out their spawning months, larval period, and temperature they generally dwell in. Once the young-of-the-year was extracted I categorized them by species and exported the longitude and latitude data to be able to plot them on the map. Some of the species showed interesting characteristic between the spring and fall but we didn't have enough information to confirm a correlation between temperatures.

After all the maps were completed I developed spreadsheets to show the abundance of young-of-the-year to temperature. I utilized the "lookup" function in excel to match the id number for each species to and output the temperature.