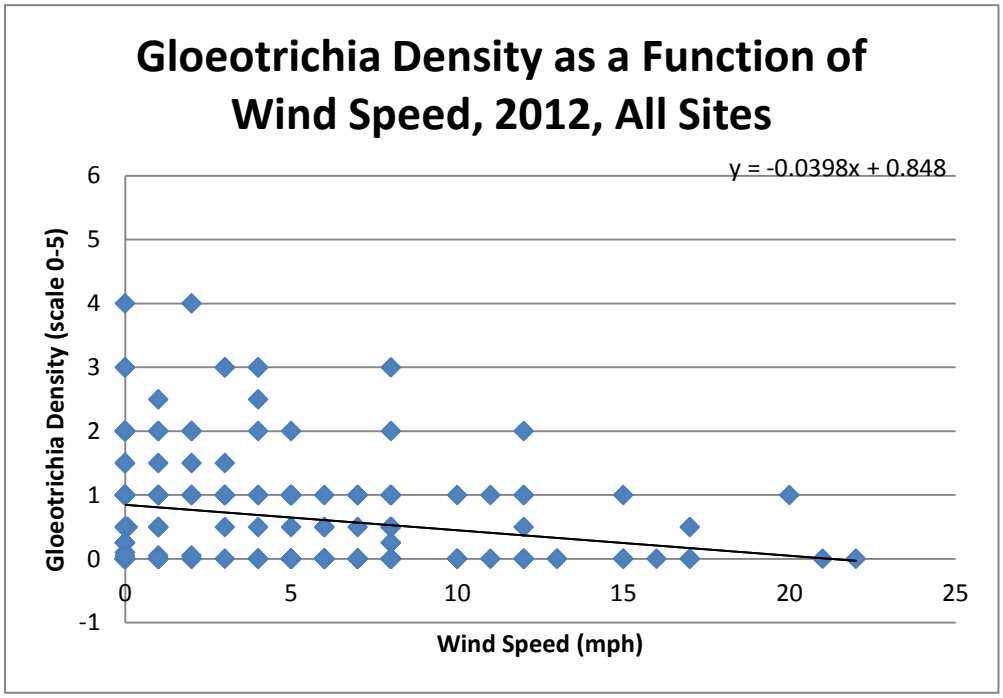
FIGURE 1 depicts the association between the wind speed and *Gloeotrichia* density described at areas of observation in the year 2012 in Great Pond and Long Pond.



In order to assess the possible association between wind speed and Gloeotrichia density, the two variables were plotted against each other for all sites in the year 2012. The wind speed was measured in miles per hour while the density of *Gloeotrichia* was recorded on a pre-determined scale of 0-5. A simple linear regression model was calculated from the data predicting a .0398 point decrease in the density of *Gloeotrichia* for every increase in wind speed of 1mph.

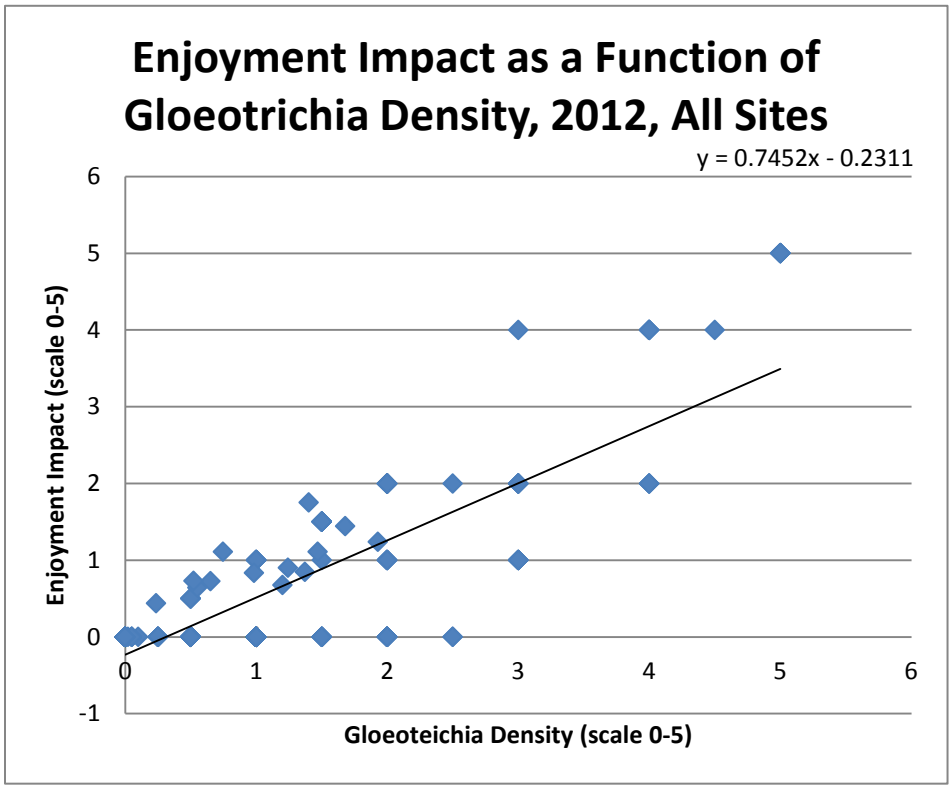


FIGURE 2 plots the enjoyment impact as a function of *Gloeotrichia* density to investigate an association between the social impacts that the *Gloeotrichia* populations may have on residents that live near the Belgrade Lakes watershed.

Figure 2 presents the graphical comparison of *Gloeotrichia* density and the enjoyment impact measured by volunteers in this study. Data from 2012 portrays a positive relationship between the two variables, predicting a .7452 point increase in the enjoyment impact of residents for every 1 point increase in the recorded *Gloeotrichia* density in that year.

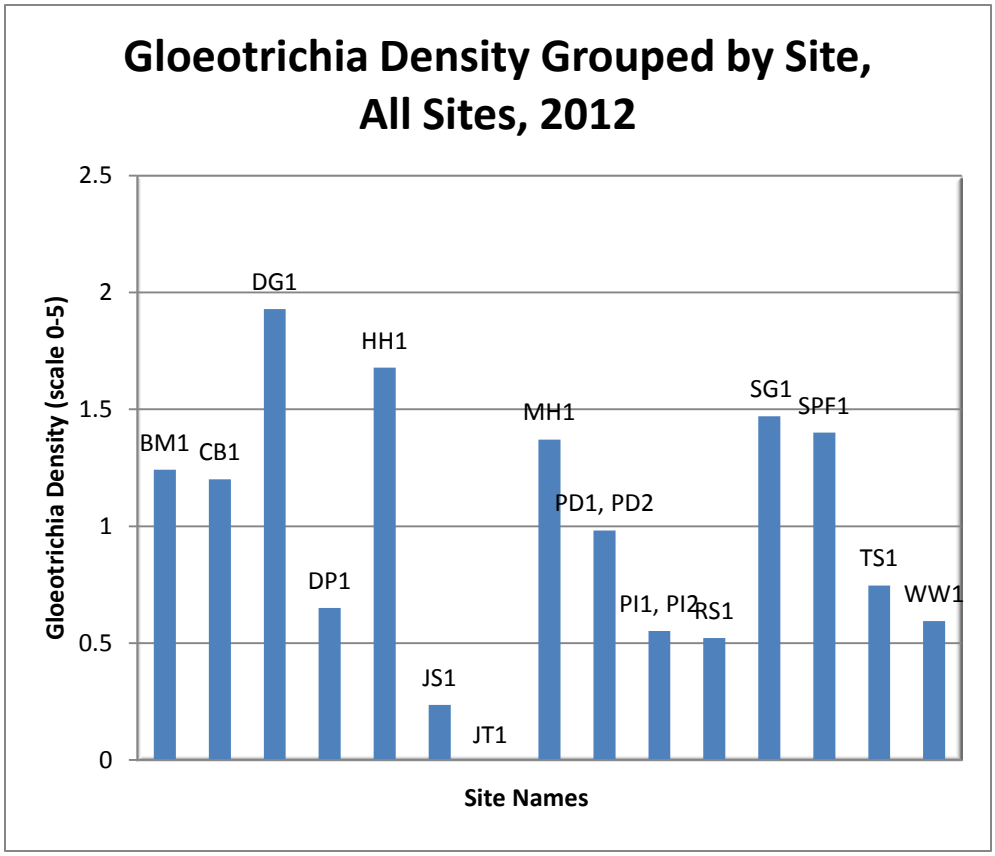


FIGURE 3 depicts the average *Gloeotrichia* densities calculated from data gathered by volunteers in the Belgrade Lakes watershed community.

Figure 3 shows the distribution of *Gloeotrichia* density measurements in 2012, each site with its own display. The bars represent the average *Gloeotrichia* density reading for each site in the Great Pond and Long Pond combined. Sites DG1 and HH1, for example, appear to be the most heavily populated areas of *Gloeotrichia* in the watershed. Further statistical tests are required to determine if these averages are significantly different than those of other sites given for 2012. Reflectively, sites JT1 and JS1 have the lowest recorded averages in *Gloeotrichia* density and therefore may be areas of least concern in the lake. Again, further significance testing is required to determine how different these measures are from other sites.

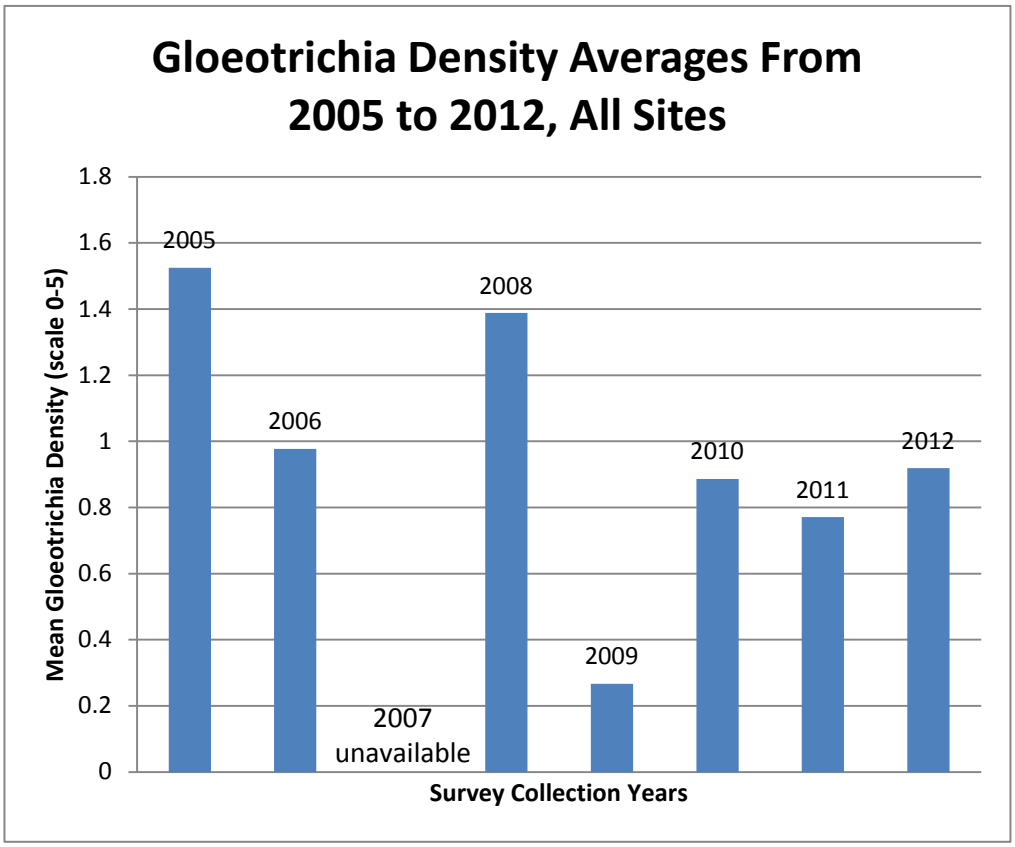


Figure 4 shows the distribution of *Gloeotrichia* densities by year in Great Pond and Long Pond as recorded by community volunteers.

Figure 4 displays the mean *Gloeotrichia* density calculated for each year of this long-term study. We can see some variability in the *Gloeotrichia* density averages in this study, though 2005 and 2008 seem to be the years that experienced the highest algal populations. Conversely, 2009 appears to have been a year with relatively low *Gloeotrichia* densities. Significance tests are required to determine if these years are significantly different from others in the study. Identifying patterns in the weather experienced in these years may allow us to predict algal growth for the determined year based on weather speculations. Other environmental factors including temperature may also play a role in the growth patterns of this alga.

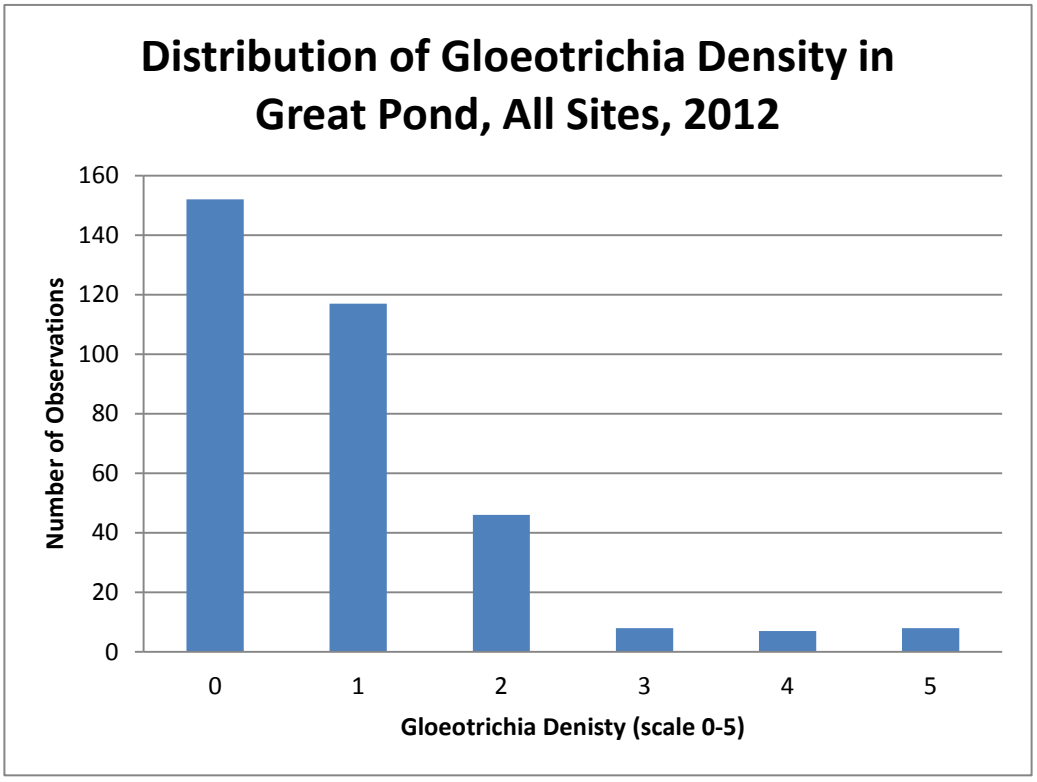


FIGURE 5 is a histogram that shows the distribution of Gloeotrichia densities at all sites within Great Pond for 2012.

In order to view the distribution of recorded *Gloeotrichia* densities during the year 2012, a histogram was constructed depicting the number of observations within each of the values on the density scale of 0-5. Figure 5 portrays this histogram, showing the steady decrease in the number of observations within each category as the value of those categories increases. The frequency of densities at values 3, 4 and 5 are approximately equal.

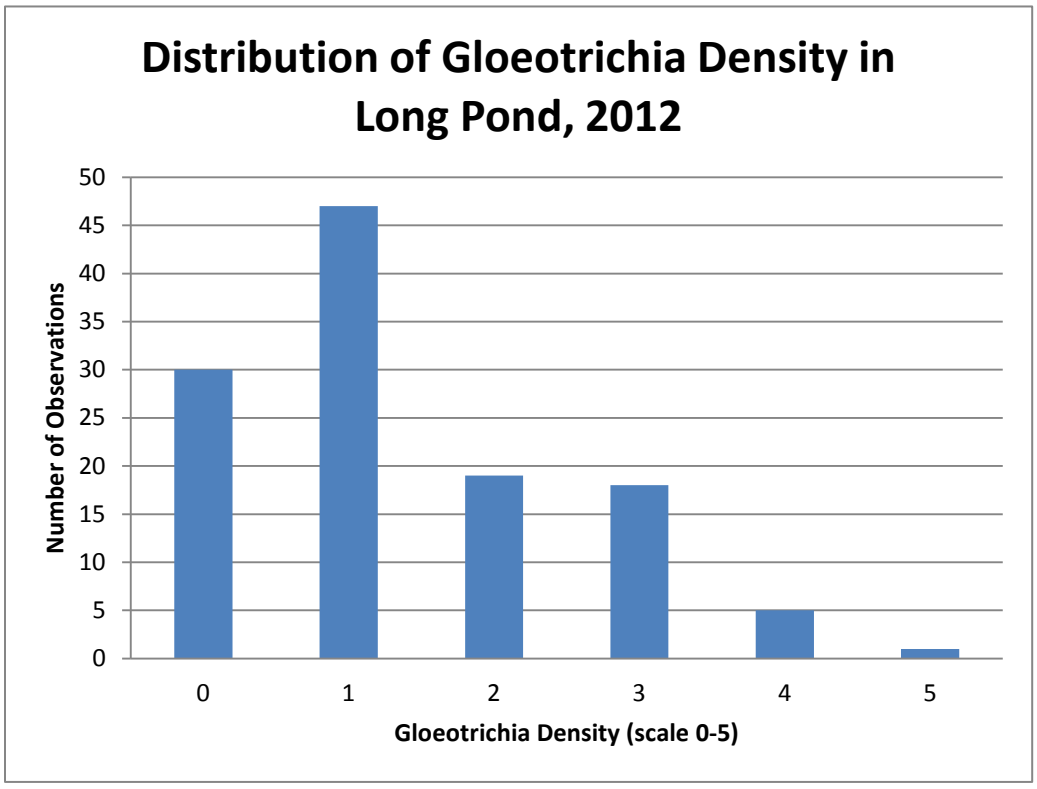


FIGURE 6 is a histogram that shows the distribution of *Gloeotrichia* densities at all sites within Long Pond for 2012.

The histogram of *Gloeotrichia* density measurements in Long Pond for the year 2012 is depicted in Figure 6. This graph shows some variability in the distribution of recorded densities, but an overall decrease in the number of observations is seen as the *Gloeotrichia* density increases. The number of observations is much greater for a density value of one than of zero. The number of observations for densities two and three are approximately equal, and the frequency of densities four and five are much lower than values two and three.

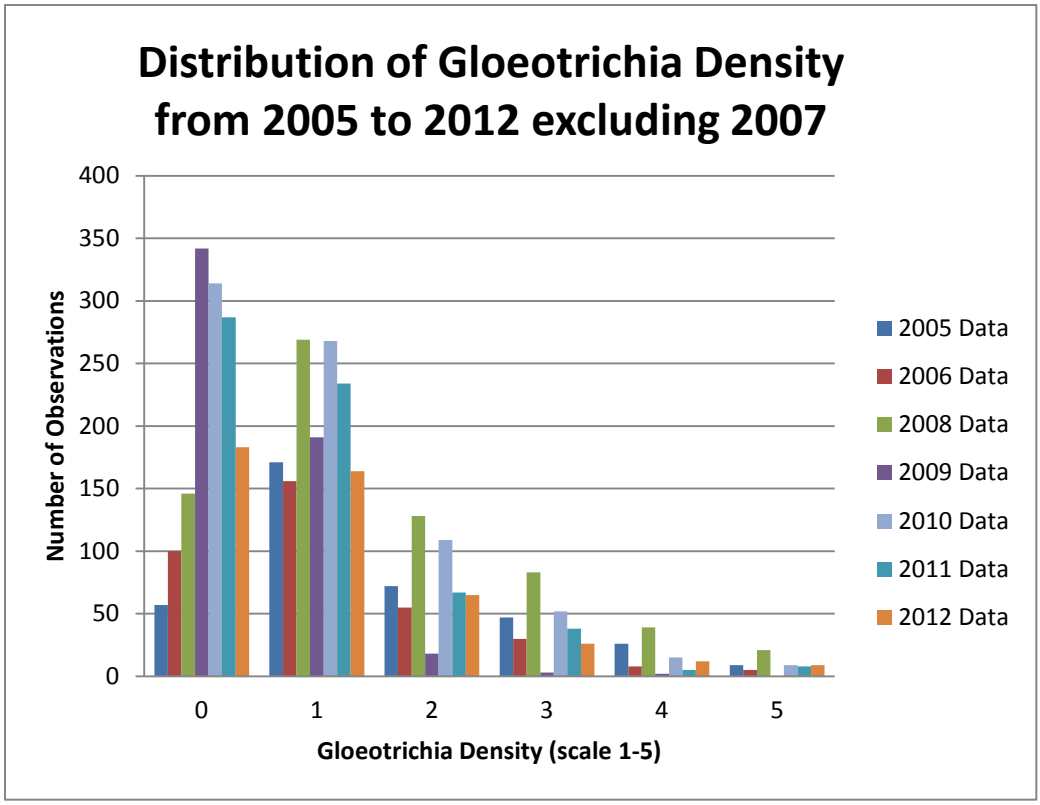


FIGURE 7 is a histogram that shows the distribution of *Gloeotrichia* densities grouped by the year in which the observations were made.

Figure 7 displays a histogram created to depict the distribution of *Gloeotrichia* density readings of all observations from 2005 to 2012 excluding 2007. This distribution is grouped by year so as to reveal any variance in the frequency of observations within each density value over time. The data for 2005, 2006 and 2008 seem unique to other years in this study as the number of observations for densities of one are more common than of zero. All other years show zero as the most common measurement and also portray a steady decrease in the frequency of observations as the *Gloeotrichia* density reading increases. The year 2008 gives the highest number of observations for each value of *Gloeotrichia* density excluding zero.