



Figure 3. Cyclic trends by functional category and lake. For each lake, we grouped genes by functional category based on their annotations and plotted their time of maximal expression across the time series. Only genes with significant variation (greater than 20% coefficient of variance) are plotted. Genes are color-coded by whether they have a significant cyclic pattern or not. This analysis revealed many categories contained cyclic genes in all three lakes, including anoxygeinc aerobic photosynthesis (AAP), general sugar transport, reactive oxygen species defense (ROS), and carbon fixation (RuBisCO). The time of maximal expression varied by lake and category, with 1:00 as a time of maximal expression in Sparkling Lake and 9:00 in Trout Bog.