



**CALIFORNIA STATE SCIENCE FAIR
2012 PROJECT SUMMARY**

Name(s) Christine Chen	Project Number S2203
Project Title Assessing Polioptila californica Population in Differing Artemisia californica Habitats, Year 2	
Objectives/Goals This purpose of this project is to study the California gnatcatcher(Polioptila californica)bird population in a newly restored California sagebrush(Artemisia californica)habitat versus that of a mature habitat. The California gnatcatcher is federally listed as a endangered species and is especially threatened due to the depletion of their native habitat, the California sagebrush. This year, I also correlated the habitat growth with the bird population data. Therefore, for this project, I hypothesize that with an increase of plant growth at the newly restored habitat, the California gnatcatcher population at the newly restored site will also increase	
Abstract Methods/Materials I conducted bird surveys in which I counted the number of birds at two different reserves- a mature site and a newly restored site. Data collected during this years' time frame along with the data collected last year were both used in statistical analysis. The surveys at each reserve were conducted at two stations in the morning, and exactly 10 minutes long, where all visible, and audible California gnatcatchers within a 75 meter radius were counted and recorded. I also collected measurements of the California sagebrush within 6 month intervals at both sites to assess the growth of each habitat.	
Results The observations noted in my research and the statistical analysis using an ANOVA test, Multiple Comparison Chart and Mann Whitney Rank Sum Test demonstrate that the growth at the newly restores site has a correlation to an increase of abundance of the California gnatcatcher at the newly restored site.	
Conclusions/Discussion These results are significant as they demonstrate the gnatcatcher utilizing the newly restored habitat after two years, much earlier than what is expected. The observation of two gnatcatchers teaching their juvenile gnatcatchers how to forge gives me the confidence to predict that as this land reserve continues to mature, the California gnatcatcher population will eventually match that of the mature habitat.	
Summary Statement This project was conducted to see if continual growth of the California sagebrush, a vital species for the California gnatcatcher, would have a correlation to any increase of abundnace of the California gnatcatcher.	
Help Received Conducted research at land reserves that belong to the Palos Verdes Peninsula Land Conservancy. My mentor, Ann Dalkey, helped oversee my project	