



**CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY**

Name(s) Tucker J. DeYoung	Project Number S1905
Project Title Nest Box Preferences for Wood Ducks, Barn Owls, and Other Species	
Abstract Objectives/Goals My goal was to determine whether the distance from water that a wood duck nesting box is placed affects the type of species nesting in it. My hypothesis was that Wood Ducks tend to nest in boxes that are placed closer to water and other species tend to nest in boxes that are placed farther from water. Methods/Materials The materials used were wood duck nest boxes mounted as part of the California Wood Duck Program on a property in Placer County, CA. The methods used in this project were collecting data on the type of species nesting in the wood duck boxes, compiling data in a spread sheet, calculating the mean distance of the boxes used by different species to water, and evaluating the significance of different mean distances using the statistical t-test. Results The mean distances to water for boxes that were nested in by Wood Ducks, Barn Owls, and other species were 11.2 feet, 5.4 feet, and 43.7 feet, respectively. The results of the t-test show that there is a significant difference between the mean distance to water for boxes occupied by Wood Ducks compared to the mean distance to water for boxes occupied by Barn Owls and for boxes occupied by other species. The hypothesis is rejected with respect to barn owls and confirmed with respect to other species. Conclusions/Discussion The data seem to suggest that Barn Owls like to nest closest to water while Wood Ducks tend to nest slightly farther away. The other species appear to have the preference of nesting farther away from water compared to Wood Ducks. However, this conclusion is based on three years of data with very few data points for Barn Owls and other species. In the future, as more boxes are installed, there may be more available data which could help to counteract the small sample size for Barn Owls and other species and perhaps control some of the variance in the data.	
Summary Statement Proximity to water was evaluated as a factor in nest box use by different species.	
Help Received Mother helped mount some photographs. Father provided research materials and editorial suggestions. Uncle advised on statistics test. Participant in California Wood Duck Program.	