



# CALIFORNIA STATE SCIENCE FAIR 2015 PROJECT SUMMARY

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| <b>Name(s)</b><br><b>Emily R. Auten</b>   | <b>Project Number</b><br><b>J1201</b> |
| <b>Project Title</b><br><b>Mammals under the Moon</b>   |                                       |
| <div><div><b>Objectives/Goals</b><p>The purpose of my project was to determine how the moon phase affected the overall number of animals passing through the Scotts Creek Watershed. My hypothesis stated as the fullness of the moon decreased, the number of animals seen would increase.</p></div><div><b>Methods/Materials</b><p>Four Bushnell Wildlife Cameras were set up in various locations along the Scotts Creek Watershed for a 6 month period (July 2014 - January 2015) to collect data. The locations were chosen based on the likelihood for high animal activity. The data was collected and entered into the computer, and the photos were analyzed to determine the presence of a mammal and its species. The data was organized according to camera location, photo number, species, temperature, date, time, and moon phase (full, waxing gibbous, first quarter, waxing crescent, new, waning crescent, third quarter, and waning gibbous). The data was then graphed correlating moon phase and all species, and moon phase with specific species showing the highest frequency of activity.</p></div><div><b>Results</b><p>Four wildlife cameras captured a total of 535 animal photos during various phases of the moon over a 6 month period. Twelve different species were identified in the photos, with bobcat, deer, skunk, and fox having the highest sample size. During the full moon, 19 photos were taken; There were 59 photos in waxing gibbous phase, 46 in first quarter, 76 in waxing crescent, 87 in waning crescent, 49 in third quarter, and 20 in the waning gibbous phase. There were 179 photos (33.5%) taken in the new moon phase which is approximately one third of all photos taken.</p></div><div><b>Conclusions/Discussion</b><p>In this study, 535 animal pictures from 4 different wildlife cameras placed in the Scotts Creek Watershed were analyzed for mammal activity in conjunction with the moon phase over a 6 month period. The study found that as the moon became darker, or closer to the new moon, there was a higher frequency of animal movement captured by the cameras. In fact, 33.5% of the total animal pictures taken were during the new moon phase.</p></div></div> |                                       |
| <b>Summary Statement</b> <p>My project looked at how the phase of the moon affects animal movement.</p>   |                                       |
| <b>Help Received</b> <p>Swanton Pacific Ranch allowed use of the wildlife cameras on their property.</p>  |                                       |