



**CALIFORNIA STATE SCIENCE FAIR  
2006 PROJECT SUMMARY**

<b>Name(s)</b> <p align="center"><b>Bryce W. Trevett</b></p>	<b>Project Number</b> <p align="center"><b>S1919</b></p>
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<b>Project Title</b> <p align="center"><b>How Habitat Fragmentation Affects Arthropod Diversity</b></p>
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<p align="center"><b>Abstract</b></p> <p><b>Objectives/Goals</b>  This research project was designed to find out if arthropod diversity decreases with increasing habitat fragmentation and development.</p> <p><b>Methods/Materials</b>  Research was conducted in chosen sites of habitat fragments in Palos Verdes. Three sites were chosen for the project that were between 0.5 and 1.5 miles from development. The arthropods were captured by constructing two pit-fall traps each site. To measure the arthropod diversity, we used a few simple elements. The number of species of arthropods were recorded, the number of individuals were recorded, and the Simpson's Diversity Index was used to calculate the data.</p> <p><b>Results</b>  Species A: Pill bug (<i>Armadillidum vulgare</i>). Species B: Grass spider (<i>Agelenopsis</i> spp). Species C: Black widow (<i>Latrodectus mactans</i>). Species D: Broad-necked darkling Beetle (<i>Coelanemis californicus</i>). Species E: European Earwig (<i>Forficula auricularia</i>). Species F: Common Black Ground Beetle (<i>Pterostichus</i> spp). Species G: Silvestri's Scorpion (<i>Paruroctonus silvestii</i>). Species H: Jerusalem cricket (<i>Stenopelmatus fuscus</i>). Species I: California spanworm (<i>Procherodes truxaliata</i>).</p> <p>Site Name Can number  bnumNumber Type and # of different species found in can Number of arthropods in can</p> <p>Del Cerro- between ½ and 1 mile #1 C-1, G-1, H-6 8  Del Cerro- between ½ and 1 mile #2 I-1, F-4, D-1 6  Bogdonavich- ½ mile #1 B-1, A-1, E-2 4  Bogdonavich- ½ mile #2 B-1, A-2 3  La Dera Linda- between 1 and 1 ½ mile. #1 C-1, D-1,G-1 3  La Dera Linda- between 1 and 1 ½ mile #2 E-15, A-3, F-2 20</p> <p>Site Name Can number  bnumNumber Type and # of different species found in can Total number of different species</p> <p>Del Cerro- between ½ and 1 mile #1 C-1, G-1, H-6 3  Del Cerro- between ½ and 1 mile #2 I-1, F-4, D-1 3  Bogdonavich- ½ mile #1 B-1, A-1, E-2 3  Bogdonavich- ½ mile #2 B-1, A-2 2  La Dera Linda- between 1 and 1 ½ mile. #1 C-1, D-1,G-1 3  La Dera Linda- between 1 and 1 ½ mile #2 E-15, A-3, F-2 3</p>
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<b>Summary Statement</b> This research project was conducted to find out how arthropod diversity is effected by the constant development happening all over Palos Verdes and if it is increasing or decreasing due to habitat fragmentation.
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<b>Help Received</b> Mother helped decorate poster board. Uncle helped peer revise report.
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