



**CALIFORNIA STATE SCIENCE FAIR  
2002 PROJECT SUMMARY**

<b>Name(s)</b> <b>Jarrett M. Sexton</b>	<b>Project Number</b> <b>S0614</b>
<b>Project Title</b> <b>Tide Pool Traffic: A Study of Human Effects on Lower Intertidal Biodiversity</b>	
<b>Abstract</b> <b>Objectives/Goals</b> The tide pools of Monterey Bay are an important aspect of the coastal ecosystem. Tourists visit the beaches and explore the tide pools on a regular basis. Occasionally tourists are not aware of the laws that protect the ecosystem in Monterey. They will collect live organisms or approach marine mammals. There has been a lot of debate over how much damage the tourists do to the lower intertidal zone. This project monitored the damage that is done to biodiversity by studying the species variation in plants and animals that reside in the lower intertidal zone. The goals for this project were to find out if human presence effects the biodiversity of the lower intertidal zone. <b>Methods/Materials</b> Six different tide pools at two separate locations were monitored; Lover's Point, which is heavily trafficked by tourists and the tide pools off of Coral Drive, which is not. The two locations are the same in substrate type, wave exposure, etc. A quarter of a square meter quadrant was placed over the tide pool and the different plant and animal species were counted. <b>Results</b> At Coral Drive there was an average of 10 different species. At Lover's Point there was an average of 7.33 species. In both plant and animal species there was more diversity at the tide pools at Coral Drive, the low traffic location. <b>Conclusions/Discussion</b> The tide pools near Coral Drive had a greater biodiversity than the tide pools at Lover's Point. This is because humans have a direct impact on the environment they live in or have access to. They disturb the environment the intertidal organisms live in by illegal collecting, trampling or moving habitat components (i.e.: rocks). Further study of this problem is needed. A study on what percent of tourists actually go down by the tide pools could be of use. This same project could be replicated in numerous places with different intertidal habitat types. Covering the different habitats and specific selection of tide pools is important for further study.	
<b>Summary Statement</b> Determining if humans effect lower intertidal biodiversity	
<b>Help Received</b>	