



California Science Center  
**CALIFORNIA STATE SCIENCE FAIR**  
**2001 PROJECT SUMMARY**

**Your Name** (List all student names if multiple authors.)

**Leah M. Stamper**

**Science Fair Use Only**

**S1822**

**Project Title** (Limit: 120 characters. Those beyond 120 will be ignored. See pg. 9)

**Factors Affecting The Distribution Of Collisella digitalis  
 And Lottia gigantea, Two Species With Overlapping Niches**

**Division**

**S Junior (6-8) S Senior (9-12)**

**Preferred Category** (See page 5 for descriptions.)

**18 - Zoology**

**Abstract** (Include Objective, Methods, Results, Conclusion. See samples on page 14.)

Use no attachments. Only text inside these boxes will be used for category assignment or given to your judges.

**Introduction:** The purpose of this project was to examine different factors that affect the distribution of the limpets *Collisella digitalis* and *Lottia gigantea*. Elevation, angle towards ocean, and limpets located in cracks were all accounted for. The distribution of limpets was used as an indication of competition between the two species that appear to share the same niche.

**Materials and Methods:** Sampling rocks were chosen along the Northern California Coastline. A sampling grid was used to select random areas to count. All the limpets in each square were recorded as well as the angle of the rock face, cracks, protected areas, and relative elevation.

**Results:** *C. digitalis* and *L. gigantea* were both significantly affected by protection, rock face angle, and elevation.

**Conclusion:** No conclusion could be made as to whether or not these two limpets share the same niche. The results do not show any factor that affects their distribution that is not shared by both species. The results are inconclusive as to the difference in niches. It is possible that another variable that was not measured, such as food source, would be a factor not shared by both species, making it possible for the two limpets to inhabit the same physical area.

**Summary Statement** (In one sentence, state what your project is about.)

A study examining physical factors that affect the distribution of two species of limpets as an indication of interspecific competition.

**Help Received in Doing Project** (e.g. Mother helped type report; Neighbor helped wire board; Used lab equipment at university X under the supervision of Dr. Y; Participant in NSF Young Scholars Program) See Display Regulation #8 on page 4.  
 mother accompanied me to the beach for sampling, father proofread and helped in analysis of results.