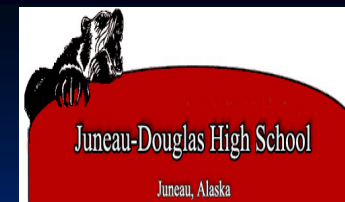


# Bioband distribution due to Wave Action

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Juneau Douglas High School, EDGE Program, March 2008



## Introduction

What are biobands? Biobands are tide lines on the beach that are defined by the species that live in each band. These biobands vary depending on how much wave action they get therefore affecting what species are in each bioband. All beaches are different, since some are completely open while others have different landforms that shelter them. I wanted to know quantitatively how great due to wave action.



## Materials and methods

We used two different beaches in this project, Aldershim beach and Auk'w Noow Beach. They both had different wave characteristics. I choose these two beaches because they both get a different amount of wave action. The first auk nu cove was set into land so it was harder for waves to get to the beach. The second Aldershim was more open so it got way more wave action than auk nu. At each beach we measured from the very bottom of the tide lines to the top of the very first bioband. Then we started from the bottom and worked our way to the top documenting with great detail what species were in each particular bioband. Then we took a square foot by square foot and estimated how many of each species were in that particular bioband. We did this in each bioband until we had a rough estimate of how many of each species were in each bioband. We also photo documented all the species on the beach and cataloged our results. This was done at both beaches.

## Results

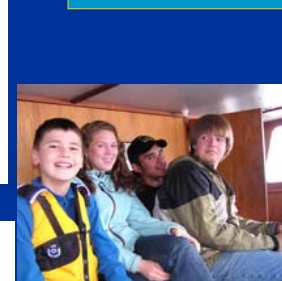
This is the data I came up with while studying the beaches.

Aldershim Beach Biobands	Bioband width
Bioband 1 Species: Acorn Barnacle Green burrowing Anemone Limpet	21 meters
Bioband 2 Species: Rockweed Thatched Barnacle Filamentous Green Algae	14 meters
Bioband 3 Species: Rockweed Blue Mussel Thatched Barnacle Acorn Barnacle	8 meters
Bioband 4 Species: Rockweed Blue Mussel Thatched barnacle Acorn Barnacle Sotka Periwinkle	5 meters
Auk'w Noow Biobands	Bioband width
Bioband 1 Species: Blue Mussel Red/Green Algae Sea lettuce	180 meters
Bioband 2 Species: Blue Mussel Red/Green Algae Sea Lettuce	148 meters
Bioband 3 Species: Blue Mussel Sea Lettuce Rockweed	132 meters
Bioband 4 Species: Sea Lettuce Rockweed	116 meters
Bioband 5 Species: Eelgrass	105 meters



## Conclusions

The Aldershim beach had more wave action therefore had compressed biobands. The Auk'w Noow beach had less wave action therefore had more wide and meandering biobands. The first bioband at Auk'w Noow was almost 10 times bigger than the first bioband that was at Aldershim. Also there was a fifth bioband at Auk'w Noow, this bioband was eelgrass. I did not find eelgrass at Aldershim, I only found it at Auk'w Noow. This is because eelgrass requires a beach with less wave action. An improvement on this project would be to study more beaches, there was also a problem using at Auk'w Noow using tracks with GIS. Another good comparison would be to look at the biomass measurements at the different beaches. Using beaches from different locations such as Oregon, California, and maybe even Florida would also further quantify these findings.



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## Acknowledgments

I would like to send a Big shout out of Thank you to Mrs. Galau. Without you this project wouldn't have been possible. Dr. Cathy Connor for your encouragement and changing my life at the EDGE camp. Kurt Wade and Elise Christey for helping me collect data and for moral support. Alberta Jones for providing information on the beaches. All the little people. My Family for outstanding moral support. All the willing slaves at the Auk'w Noow Marine Science Camp who helped gather information.

