

## **Species composition, abundance and size-frequency distribution of intertidal clam populations in Kachemak Bay, Alaska, in relation to salinity and nutrient conditions.**

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Counting carbs? Well, you're not the only one, except that Carrie Belben, a graduate student at the University of Alaska Fairbanks, is not on the Atkin's Diet. She is counting carbs in the clams that she digs up along the beaches of Kachemak Bay. Clams are an important aspect in the function of our world's oceans. Clams aid in taking nutrients out of the water column and change them into a form that can be utilized by other organisms, including humans. They are also sediment stabilizers by compacting the sediment, which provides substrate for many other intertidal organisms to grow on. These organisms include sea anemones, kelp and algae, barnacles, and mussels that, in turn, provides habitat for organisms such as sea stars and crabs. Over the past few decades, residents from villages along Kachemak Bay have noticed that the amount of clams in certain beaches has declined drastically. Carrie's graduate thesis investigates the cause of this. To do this, she is determining the nutrient content present in clam tissue that she collects at Port Graham, Jakolof Bay, and China Poot Bay. In other words, Carrie is measuring how much protein, fat, and carbohydrate is present in the clams, in order to see if they are getting the proper amount of nutrients they need to survive. The main purpose behind Carrie's research is to further understand the role that clams play in the ecosystem of Kachemak Bay and the processes that govern the lifestyle of clams in the area, which can aid in an improved management strategy for shellfish harvesting.