Alutiiq Use of Birds at Rice Ridge (49-KOD-363), Kodiak Island

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About Rice Ridge

Rice Ridge is a deeply stratified archaeological deposit on Kodiak Island. It has a well-preserved faunal assemblage, including an extensive bird bone assemblage, associated with the Ocean Bay tradition (7600-4200 BP)[2]. One study[1] has shown that birds are an important part of the lifeways of Ocean Bay groups, but this has not yet been investigated on Kodiak Island, where Alutiiq ancestors have conventionally been portrayed as primarily dependent on marine mammals and fish.

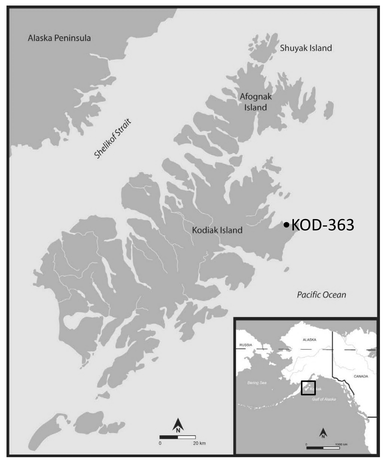
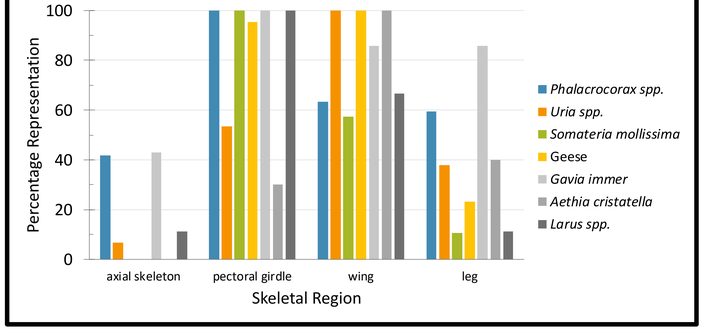


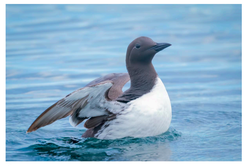
Figure adapted from Kopperl (2012)

Skeletal Representation

Analyzing the skeletal representation can reveal how the people at Rice Ridge were processing bird carcasses. In *S. mollissima* and *A. cristatella*, there is a higher proportion of bones from the wing than from the pectoral girdle. In all taxa except *G. immer*, bones from the legs are highly underrepresented. All taxa show an underrepresentation of the axial skeleton – this is not surprising as only one element from this region is used to determine MNI. As most bones are found in midden contexts, our analysis shows that wings were the most discarded region. Wings are typically removed when producing bird skins, but not when the only use of the birds is as food. This supports the idea that birds were sought out for their skins, not just for food.

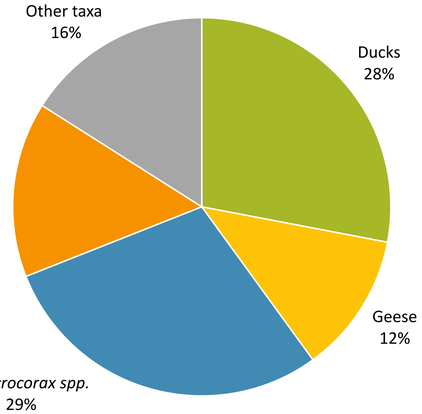


Taxonomic Breakdown



Source: oceana.org

Source: borealbirds.org

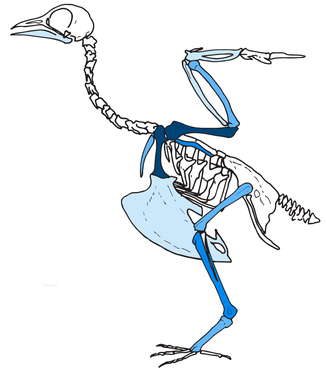


Source: audubon.org

Source: deltawaterfowl.org

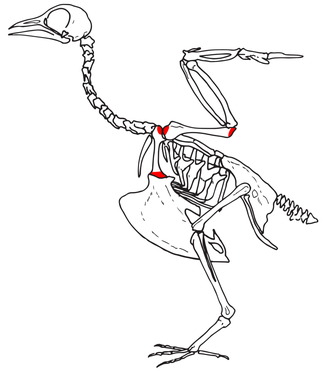
Bone Modifications

Relative Cut Mark Frequency



The highest frequency of cut marks (shown in dark blue) is around the shoulder joint on the humerus, scapula, and coracoid. This indicates that bird wings were routinely disarticulated from the body. The second highest frequency of cut marks is on the leg, focusing on the tibiotarsus. This indicates that the feet were regularly disarticulated. Both the disarticulation of wings and feet could be evidence of either skin production or butchery. The frequency of cut marks in these areas are similar across all taxa.

Most Common Burn Marks



Burn marks are typically indicative of cooking practices. While burn marks are present on numerous elements, the most common occurred on both ends of the humerus and coracoid. For this to happen, the ends of the bones must be exposed and not covered with meat during cooking[4]. In conjunction with the high frequency of cut marks in this area, this pattern of burning leads us to believe that wings were being disarticulated from the body prior to the cooking of the birds.

Figures adapted from Cohen & Serjeanston (1996)

Discussion

Our analysis so far has focused on the cultural uses of different bird taxa. Skeletal representation analysis shows that birds were likely being used for skins. This can be supported by our analysis of bone modifications. Less than 5% of all bone fragments were identified as terrestrial species, indicating a heavy exploitation of marine birds. Marine birds have dense, waterproof feathers, making their skins ideal for clothing in the cold, wet climate of Kodiak Island, which is why they are sought out for this today.

Our analysis of bone modifications also shows that birds were a likely source of food. We do not know what percentage they were of the ancestral Alutiiq diet, but the cut and burn marks indicate butchery and roasting of the birds[4]. We are therefore able to infer that birds were used both as food sources and to make bird skin clothing.

Modern Yup'ik bird skin parka
Source: yupikscience.org

The relative abundance of the top four taxa is similar between unmodified, cut, and burned bones, with ducks and *Phalacrocorax* spp. being more abundant than geese and *Uria* spp. However, ducks make up a significantly higher percentage of both cut and burned bones than of unmodified bones (40% and 36% versus 28%, respectively). This is likely indicative of processing practices and not of ducks having a different use than other taxa.

Continued Research

- What species of geese are present?
- What do changes over time in the prevalence of different taxa reveal about ecological changes?

References

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2. Cohen, A., & Serjeanston, D. (1996). *A Manual for the Identification of Bird Bones from Archaeological Sites*.
3. Kopperl, R. E. (2012). Chronology of the Ocean Bay Tradition on Kodiak Island, Alaska: Stratigraphic and Radiocarbon Analysis of the Rice Ridge Site (KOD-363). *Alaska Journal of Archaeology*, *10*, 17–35.
4. Serjeanston, D. (2009). *Birds*. Cambridge University Press.

Acknowledgments

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