



The process of salvaging a dead killer whale found on Kruzof Island to a skeleton hanging in the Sitka Sound Science Center (SSSC) was a major accomplishment. The project began with Jan Straley of the University of Alaska Southeast. Straley, along with the National Marine Fisheries Service (NMFS) Marine Mammal Stranding Network, Dr. Shannon Atkinson of the University of Alaska Fairbanks, and a large number of volunteers were sent to necropsy (an animal autopsy to determine cause of death) a young killer whale on a beach near Sitka, Alaska in March 2011. Almost a year to the day after the project began, we can stand back and admire the cleaned and rearticulated skeleton hanging in the aquarium at the SSSC.

How did this happen?

The first step was getting people to the beach. The US Forest Service generously donated a vessel and time to ferry people from Sitka to the location of the whale on Kruzof Island. We

were fortunate to have Dr. Stephen Raverty of Canada's Department of Fisheries and Oceans lead the necropsy. The whale was measured, sampled and cleaned as much as possible on the beach. The remaining parts were then cut into manageable pieces that could be hauled to the boat and returned to Sitka. (The killer whale it was found on Kruzof Island is shown to the left above.)

How did the bones get white?

Cleaning the bones came next. They were boiled to remove the muscle and soft tissue. Students in the Making Waves summer camp held at the SSSC continued the cleaning process. The middle school students donned gloves and picked up scrub brushes to clean the slimy, messy bones. They were a huge help, particularly in cleaning small spaces like the brain case where adult hands had trouble fitting. (Making Waves Campers clean bones in the picture to the right.)



Once the bones were free of soft tissue, they needed to be degreased. All bones have some grease in them. Whales have much more grease in their bones than most mammals and the degreasing process took longer than anyone expected. The grease needs to be removed so that the bones do not smell or discolor over time. Chemicals like ammonia, detergent, gasoline and peroxide were used to degrease and whiten the bones. The whitening process took months and used over 300 gallons of ammonia!



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Image courtesy of Idaho Virtualization Lab



Photo credit: Alaina Avery, SSSC
Specimen obtained under NOAA Fisheries Marine Mammal Health and Stranding Response Program (permit #932-1905)

The Idaho Virtualization Laboratory obtained a National Science Foundation grant that enabled them to come to SSSC and scan the bones into a digital format (pictured above). Each bone was measured, weighed and photographed by AmeriCorps volunteer Alaina Avery. (Measuring tools and record keeping items are shown to the left.) The skull even took a trip to Sitka Community Hospital for a CT scan! All this information will be available to compare with other killer whale bone measurements.

How did it get back together?

The final process was perhaps the most fun. Drs. Atkinson and Jason Waite, along with employees of the SSSC and volunteers puzzled the bones back together into their original places to bring the killer whale back to life. It took five days to get the bones reassembled. (The rearticulation is shown to the right. Below, workers stand proudly with the newly completed skeleton.) The whale skeleton is now on permanent display at SSSC after its grand unveiling on April 22nd 2012.



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Photo credit: Alaina Avery

SSSC is immensely grateful to all of the volunteers who helped us with this project!



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