



Multi-year Investigation of Pacific Walrus Haulout Mortality Events at Point Lay, Alaska

The distribution and habitat use patterns of Pacific walrus is rapidly changing. Diminishing sea ice habitat is limiting access to off-shore feeding areas and contributing to increased dependence on coastal areas. Large walrus herds have formed in recent years along the Chukchi coast where animals are vulnerable to disturbance events that can result in animal mortalities. As summer ice cover decreases, commercial activities along the Arctic coastline and continental shelf waters are rapidly expanding leading to increased interactions with and impacts to walrus. Pacific Walrus (*Odobenus rosmarus*) are an important subsistence species, and understanding the role of natural causes of morbidity/mortality, disease and toxins is a high priority from a food security and food safety perspective.

In recent years disturbance-related mortality at the Point Lay coastal haulout (2011-2017) has emerged as a management and conservation issue for the Pacific walrus population. Investigation and documentation of haulout mortalities play an important role in understanding and defining the health status of free-ranging Pacific walrus, and is an excellent tool to identify known and emerging marine threat issues.



L to R: Warren Harding, Raphaela Stimmelmayer and Isaac Leavitt sampling carcasses at haulout near Kali, or Point Lay. Walrus hauled out on barrier island near Point Lay.

KEY FINDINGS

- Human disturbance is an important factor in triggering stampedes.
- Death due to trampling is associated with several key forensic signs: bruising/discoloration, tusk puncture wounds, bone fractures, bloody fluid in chest and abdomen, organ compression and torsion, bloody eyes, brain hemorrhage, bleeding from nose and mouth.
- Stampede impacts occur in stages with sudden death and delayed death of injured animals over several days.
- Timely investigation is needed as walrus carcasses are scavenged by large predators and/or moved by ocean currents.
- Calves and yearlings are the predominant age group, but depending on size of haul-out, subadult and adult animals can be trampled as well.

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