

*Session SSL-8: Steller Sea Lion Biology and Ecology
Diet*

Application of laser ablation ICP-MS to elemental fingerprinting and isotope analysis to evaluate nutritional history and diet of Steller Sea lion

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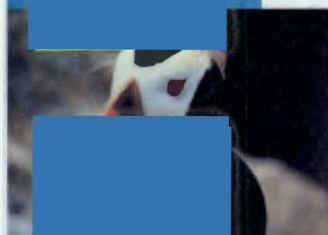
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Abiotic and biotic factors can have profound nutritional importance to mammalian growth parameters. Generally, select biological samples will carry measures of growth conditions in the form of element deposition patterns and isotope concentrations. Metabolically inert, stable tissue products such as keratin containing nails and vibrissae, and mineralized deposits such as bone, can be used as time-integrated records of nutritional condition. Unfortunately often the physical deposition pattern in the animal is at a scale too fine to resolve with standard analytical techniques. Laser Ablation Inductively Coupled Mass Spectrometry (LA-ICPMS) provides a means of sampling biological tissues at scales ranging from 10 to 300um sample size, and providing quantitative in situ trace and ultra-trace elemental and isotope analysis. We report the preliminary findings from application of LA-ICPMS on sea lion vibrissae, milk, and blood samples. Research supported by NMFS, NMML/NOAA and ADF&G. Samples were collected under NMFS permit # 358156400.

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Abstracts



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