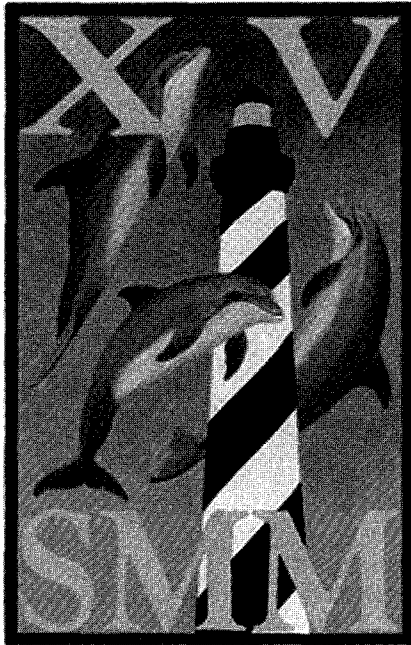


A Field-Based Method for Estimating Age in Wild Juvenile Steller Sea Lions (*Eumetopias jubatus*)King, James¹; Gelatt, Thomas¹; Pitcher, Kenneth¹*(1) The Alaska Department of Fish and Game, 525 West 67th Ave, Anchorage, Alaska 99518*

Studies of health, survival, and development of juvenile Alaskan Steller sea lions require accurate estimates of age for wild captured animals. However, the value and accuracy of several potential predictors of age (body length, whisker and tooth measurements) has not been directly assessed with data from known-age wild Steller sea lions. During 2001-2002, 22 individuals originally hot-branded as pups on rookeries in the Aleutian Islands, Prince William Sound, and Southeast Alaska were recaptured by the Alaska Department of Fish and Game at 3-23 months of age. These individuals provided a known-age sample to assess the ability of (1) canine length, (2) diastema length, (3) whisker length, and (4) body length to predict age of juvenile animals. Age was strongly correlated with permanent canine length ($R^2=0.88$; $P < 0.001$; $n=12$) and less so with body length ($R^2=0.71$; $P < 0.001$; $n=22$). Diastema and whisker length were least correlated with age ($R^2=0.46$ and 0.30 respectively; $P < 0.01$; $n=22$). The regression formula, canine length (mm) = $0.412 + (1.075 \cdot \text{age}(\text{months}))$ predicted age to within two months of all known age captures with permanent canines ($n=12$). Steller sea lions are pulse breeders with births occurring from late May through early July therefore an age prediction to within two months allows assignment to the year of birth. Tooth eruption state, as documented from the known age animals, was also useful for estimating age of juvenile sea lions. The combination of canine length and tooth eruption state will in most cases accurately predict the age of Steller sea lions < 2 years of age. This technique provides for immediate estimates of age for animals captured in the field and does not require the extraction of teeth.

15th Biennial Conference



NORTH CAROLINA 2003

on the **Biology of
Marine Mammals**

**Greensboro, NC, USA
14 - 19 December 2003**



Society for Marine Mammalogy

CONFERENCE COMMITTEE

Edward O. Keith – *Chair*

Lemnuel Aragonés
Edmund Gerstein
Carolyn Kurle
Frances Michaelis
Alejandro Ortega
Aldemaro Romero
Caryn Self Sullivan

SCIENTIFIC PROGRAM COMMITTEE

Aleta A. Hohn – *Chair*

Robin Baird
Annalisa Berta
Bob Bonde
Frank Fish
Tero Härkönen
Denise Herzing
Sascha Hooker
Paul Jepson
Richard Merrick
Monica Muelbert
Patricia Rosel
Michael Scott
Ursula Siebert
Garry Stenson
Rob Stewart
Jim Sumich
Fernando Trujillo
Gordon Waring
Doug Wartzok
Ben Wilson
Graham Worthy

Zoey Zahorodny – *Assistant to the
Scientific Program Committee*