Percent Total Body Lipid Content Increases in Steller Sea Lion (*Eumetopias jubatus*) Pups During the First Year of Life in a Similar Pattern to other Otariid Species.

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Although several studies have suggested that early-lactation Steller sea lion (SSL) pups (birth to 6 weeks of age) are healthy and well nourished, there has been continued concern that if mothers were nutritionally stressed they may not be able to fully support larger, mid- or late-lactation pups, possibly leading to decreased survivorship of juveniles. This study estimated the percent total body lipid content (TBL) of 382 SSL pups (2 to 11 months of age) using the deuterium dilution technique to determine if poor body condition was evident in this species within the first year of development. Samples were collected from pups captured in Southeast Alaska (SEA; n=135), Prince William Sound (PWS; n=160), Gulf of Alaska (GOA; n=25) and the Aleutian Islands (AL; n=62) between 1998 and 2008. Male pups were larger and slightly leaner than females in all regions, thus were considered separately. Both male and female pups were smaller and leaner in SEA than in regions of the western population (PWS, GOA and AL). Mean TBL of male pups in AL increased significantly during the first year of development from 15.9 ± 5.0 % (mean ± SD) in early-lactation (2-3 months of age, n=9) to 32.4 ± 5.3 % in late-lactation (10-11 months of age, n=17; P=0.0000, F2,33=35.29). Similarly, mean TBL of female pups in AL increased from 23.5 ± 3.1 % in early-lactation (2-3 months of age, n=7) to 35.9 ± 5.2 % in late-lactation (10-11 months of age, n=11; P=0.0002, F3,29=9.46). Mean TBL contents of early-lactation SSL pups was similar to those values previously reported for California sea lions (*Zalophus californianus*) and Australian fur seals (*Arctocephalus pusillus*) of similar ages. Additionally, mid- and late-lactation TBL contents of SSL pups fall within the range of values reported for Australian fur seals of similar ages. This leads us to conclude that there is no evidence of poor body condition in western stock SSL pups during the first year of development.

Alaska Marine Science Symposium

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January 19–23, 2009

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