

*Session SSL-6: Steller Sea Lion Biology and Ecology
Population Status and Dispersal*

Mark-recapture studies of branded sea lions pups at Lowrie Island, Alaska

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In June 2001 and 2002, a total of 427 Steller sea lion pups were branded (62% of which were also tagged) at Lowrie Island and Cape Horn Rocks (~ 0.5 km distant from Lowrie Island) in Southeast Alaska. During July – October, 2001 and July – September, 2002 over 4,000 resights of these pups were collected at Lowrie Island. Systematic weekly resight surveys were conducted in which two observers simultaneously and independently read brands and flipper tags at 8-9 standard observation sites. Without consideration of brand misreading, return rates of these pups indicated 94% and 99% of pups branded on Lowrie Island and 66% of pups branded at Cape Horn Rocks were observed on Lowrie Island on some day after the branding event. We estimated brand misread rates and examined factors affecting misread rates using resight data in which 1) both brands and tags were resighted on the same individuals and/or 2) brands and/or tags were independently read by two or more observers simultaneously. We estimated tag loss rates to 3 months of age from multiple sightings of tagged individuals. We also examined apparent survival (survival confounded with dispersal) probabilities from branding to 3-4 months of age and the probability of pups reuniting with mothers after branding using mark-recapture models. These analyses provide an initial evaluation of immediate effects of branding on survival of Steller sea lion pups. These data will be combined with future resighting data from throughout Southeast Alaska, to estimate age-specific survival of Steller sea lions.

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