

# **Observations of Steller Sea Lions from the Western Population at South Marble Island, Glacier Bay National Park**

Elizabeth A. Mathews  
University of Alaska Southeast  
11120 Glacier Highway  
Juneau, Alaska 99801

June 2003

This document summarizes observations of Steller sea lions (*Eumetopias jubatus*) from the western population at South Marble Island in Glacier Bay National Park. Glacier Bay is within the range of the eastern population of Steller sea lions and the western population is classified as “endangered,” whereas the eastern population is considered “threatened” under the Endangered Species Act. South Marble Island is not a rookery (breeding haulout).

Observations were made primarily during a vessel interaction study that occurred during 1994, 1995, and 1997. Two observers monitored the sea lion haulout (resting area) for a total of 23 days: 8 days in 1994 (1-7 August and 8 September), 5 days in 1995 (28 July – 1 August), and 10 days in 1997 (11-18 July; 27-28 September). During this study two people tabulated the behavior of all sea lions every 2 or 3 minutes for approximately every hour per 1.5 hours. Observations of the northeast haulout site on South Marble Island were made almost continuously for 9– 14 hours per day. We monitored the haulout for a total of 233 h.

In addition, one observer (Kate Casey, NPS volunteer) monitored the South Marble Island haulout from shore from 6-10 October 1995. Observations and counts were also made from a daily tourboat and we obtained sightings primarily of branded sea lions from these observations, as tags are very difficult to see from a moving boat. One observation of a flipper-tagged sea lion was made by Julia Richards, an NPS Interpretive Ranger who was on a tourboat at the time.

We observed sea lions with flipper tags, including one that also had a brand, on 6 different occasions and some individuals were present on more than one day (Table 1). In 1996, I sent the data on our tag observations to Ken Pitcher (Alaska Department of Fish and Game, Anchorage, AK). He thought that most likely the beige and yellow tags (ID#s: 9417, 9533, 9535, and 9536) that we had observed on 30 August 1994, 29-31 July, 1995, and 10 Oct, 1995 (Table 2) were animals tagged at Marmot Island by the National Marine Fisheries Service in the 1990s. Sketches of the 2 of the flipper tags were made and may be useful in confirming their origin (Figs. 1 and 2). Sea lion “F250” had a brand and a flipper tage and was branded in 1994 at Lowrie Island (in the Forrester Island complex). “F250” is a female (ADF&G Steller sea lion branding database).

Table 2 summarizes all marked sea lions (flipper tags and brands) that we observed that were most likely from the western population of Steller sea lions. Monthly high counts are included for each year. I calculated a minimal estimate of the percent of Steller sea lions from the western population by using the number of marked western population animals observed divided by the total count from the day of the observation. Clearly these represent very conservative minimal estimates as there could have been unmarked animals from the western population and we could also have missed some sea lions with flipper tags.

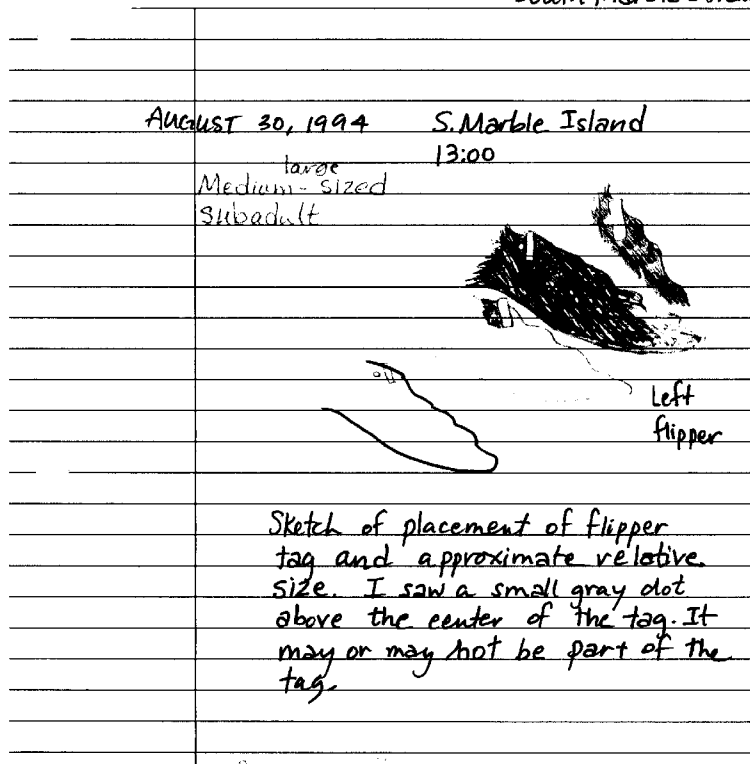
**Table 1.** Six Steller sea lions with flipper tags attached to their fore flippers were observed on South Marble Island in Glacier Bay National Park during a vessel interaction study.

ID#	Date	Observer	Side	Primary Color	2nd Color	Size	Sex	Description
9417	8/30/1994	EAM	Left	beige	yellow	med/lrg	unknown	Field sketch of position
9533	10/10/1995	Kate Casey	Right	yellow	gold	lrg	male	Adult bull with yellow/gold tag on trailing edge of right flipper twds. Base
9535	7/29/1995	EAM	Both	beige	yellow	med	male	Juvenile male with beige or pale yellow tag on the trailing edge of both fore flippers. Description in Beth's field book 7/31/95.
	7/30/1995	EAM						
	7/31/1995	EAM						
9536	7/31/1995	EAM	Right	beige	bronze	small	male	beige/bronze, poss. Pale yellow/cream w/stain; couldn't see left side. Drawing in Beth's field book.
9705	7/30/1997	Julia Richards	Left	silver		med/lrg	unknown	small silver tag on left "thumb"
F250	7/10/1997	EAM	Right	red	red	med	female	has a brand on left side (F250) and a red tag on the right fore flipper Sketch in data notebook.  Gender is from ADF&G branding database.
	7/12/1997	EAM						
	7/13/1997	EAM						
	7/14/1997	EAM						
	7/15/1997	EAM						
	7/17/1997	LB Dzinich						

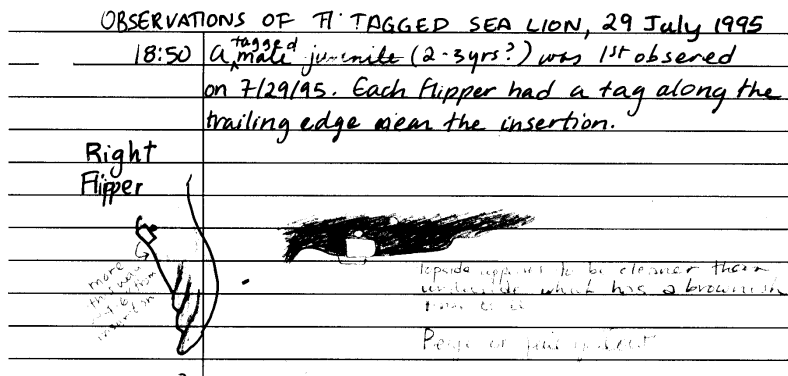
**Table 2.** Summary of high counts of Steller sea lions by month at South Marble Island, total number of individual sea lions observed with brands (# Brands), and the number of sea lions from the western population with brands or flipper tags each year. All branded sea lions were from the Forrester Island complex in southeastern Alaska, except for the two observed in 1998. These two sea lions (C093 and C104) were most likely branded as pups in Russia. The minimal percent of Steller sea lions at South Marble Island was calculated using the count of sea lions on the haulout from the day of the brand observation; thus, it is a very conservative estimate.

Year	Max Counts					Eastern Population: # Brands	Western Population			Min. % of SSL from W. Pop.	Notes
	May	June	July	Aug	Sept		Brands	Flipper Tags	month		
1994	155	157	69	145	173	5	0	1	Aug	0.7%	most likely tagged at Marmot Island
1995		131	108	109	127	1	0	3	Jul & Oct	1.9%	most likely tagged at Marmot Island; 2 from July used for min.%
1996	100	98	15	257	180	13	0	0			
1997		274	276	299	398	18	0	1*	July		1 sea lion with a flipper tag; not certain if from western population
1998	252	120	260	509	467	6	2	0	July	0.8%	Sea lions possibly from Russia; brands began with 'C'

P. 51 b  
 30 August, 1994  
 E.A. Mathews  
 South Marble Island



29-30 July 1995  
 E.A. Mathews  
 South Marble IS.

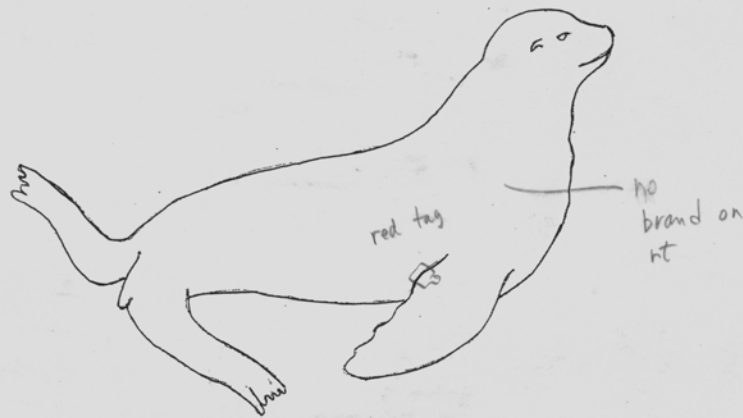


**Figure 1.** Sketches of flipper tags on 2 different Steller sea lions observed at South Marble Island during August 1994 and July 1995.

Northern Sea Lions: Individual Identification  
Glacier Bay National Park

ID Number: <del>F604</del> F250
Sea Lion Name:

medium, slightly smaller than  
291



**Figure 2.** Sketch of flipper tag and location of brand on a Steller sea lion observed at South Marble Island in July 1997.