

Population Monitoring of Elephants Seals at Año Nuevo, 2010

R. Condit

Table 1: Estimates of breeding elephant seal female and pup populations, Año Nuevo rookery, 2010. Number of pups born estimated as $0.975 \times$ female number. Heavy surf in mid-January caused females to leave NP and ANI.

Area	Breeding females	Pups born	Pups weaned
Main point	1448	1412	1279
North point	331	323	259
Island	427	416	305
Total	2206	2151	1843

Table 2: Mean body mass in kg for elephant seals, Año Nuevo rookery, 2010. Sample size in parentheses. No correction for time since weaning date.

Age	Females	Males	Sex unknown
Weaner	108.3 (122)	111.4 (111)	127.3 (3)
Pup	74.1 (7)	78.3 (14)	(0)
Adult	411.0 (22)	(0)	(0)

Table 3: Age and origin of breeding females whose tags were read, Año Nuevo rookery, 2010. The row *known* for Año Nuevo is the sum of the previous rows of known age. The following row is the number of observed females that had been tagged at Año Nuevo as adults, so age is not known. Age of most foreign-tagged females is not available to us.

Origin	Age	Main Point	North Point	Island	Total
Año Nuevo	2	0	1	0	1
	3	5	1	0	6
	4	12	7	0	19
	5	11	10	0	21
	6	3	5	0	8
	7	11	3	1	15
	8	11	1	0	12
	9	3	0	0	3
	10	7	8	0	15
	11	7	1	0	8
	12	8	1	1	10
	14	1	2	0	3
	15	5	0	0	5
	16	3	0	1	4
	19	1	0	0	1
	20	1	0	0	1
	Año Nuevo	known	89	40	3
unknown		31	6	0	37
San Miguel		6	4	5	15
Point Reyes		6	2	1	9
Gorda		4	1	0	5
Piedras Blancas		8	4	1	13
San Nicolas		2	0	0	2
MM Center		1	0	0	1

Table 4: Elephant seal tagging, Año Nuevo colony, 2010. A total of 678 Roto tags (green) were deployed on 437 animals. This included 401 weaners/pups plus 9 older animals tagged for the first time, as well as 27 animals re-tagged (already tagged in earlier years). In addition, 5 tags were voided and 16 were unaccounted for (observed but never recorded as original). A total of 0 PIT tags were also deployed on 0 animals, of which 0 were pups or weaners. PIT tags were always deployed with Roto tags.

The table below covers young-of-the-year by sex and number of tags. The column Total includes a few animals given 3 Roto tags, and the row Total includes a few with sex unknown. Those with PIT tags also had Roto tags and are included in the Total column.

Sex	Single green tag	Double green tag	Total	Also given PIT tag
Female	107	6	176	0
Male	101	3	161	0
Total	214	10	401	0

Table 5: Number of individual sightings and individual animals identified each year since 2003

Year	Breeding		Non-breeding	
	Sightings	Animals	Sightings	Animals
2003	2926	186	21	1
2004	3779	207	144	32
2005	4926	270	1782	235
2006	4229	286	707	216
2007	2693	187	572	127
2008	1914	200	1271	287
2009	3064	208	835	207
2010	4932	242	2065	346