

Population Monitoring of Elephants

Seals at Año Nuevo, 2016

R. Condit

Population : Estimates of breeding elephant seal female and pup populations, Año Nuevo rookery, 2016. Number of pups born estimated as $0.975 \times$ female number. There must have been at least 35 weaners that moved from NP to main point area before the final census on 2 Mar

Area	Breeding females	Pups born	Pups weaned
Main point	1415	1380	1350
North point	243	237	144
Island	450	439	281
Total	2107	2055	1775

Weighing : Mean body mass in kg for elephant seals, Año Nuevo rookery, 2016. Sample size in parentheses. No correction for time since weaning date.

Age	F	M
P	48.1 (7)	47.8 (5)
W	108.4 (161)	110.9 (125)

Female age distribution : Age and origin of breeding females whose tags were read, Año Nuevo rookery, 2016. 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	3	10	0	0	10
	4	40	5	0	45
	5	14	1	0	15
	6	10	1	0	11
	7	13	5	0	18
	8	6	1	0	7
	9	12	1	0	13
	10	3	2	0	5
	11	4	3	0	7
	12	0	1	0	1
	13	4	1	0	5
	14	3	0	0	3
	16	1	1	0	2
	17	1	0	0	1
	19	0	1	0	1
	Año Nuevo	known	121	23	0
unknown		34	6	0	40
San Miguel		7	0	1	8
Point Reyes		2	1	1	4
Gorda		3	3	0	6
Piedras Blancas		10	3	1	14
San Nicolas		0	1	0	1
MM Center		1	1	1	3

Newly tagged animals : Animals tagged for the first time in 2016 at the Año Nuevo colony. Number of animals tagged by age category and sex; YOY=pup/weaner (young-of-the-year) and Y=yearling. A total of 857 green tags plus 0 PIT tags were deployed on these animals. An additional 53 tags were voided, and 0 were observed on YOY but do not appear in the database.

age cat	female	male	sex unknown
YOY	224	180	50
Y	0	3	0
juv	0	0	0
SA	0	65	0
ad	0	15	0
Total	224	263	50

Newly tagged animals : Animals tagged for the first time in 2016 at the Año Nuevo colony. Number of animals singly- and doubly-tagged, adults/juveniles. The category 2+ includes a small number with 3 tags (27 were given 3 or more green tags; 0 were given 3 or more PIT tags).

PIT tags	Green tags		
	0	1	2+
0	1	80	2

Newly tagged animals : Animals tagged for the first time in 2016 at the Año Nuevo colony. Number of animals singly- and doubly-tagged, pups/weaners (YOY). The category 2+ includes a small number with 3 tags (27 were given 3 or more green tags; 0 were given 3 or more PIT tags).

PIT tags	Green tags	
	1	2+
0	162	292

Re-tagged animals : Animals tagged in prior years (at any colony) then given a new tag in 2016 at the Año Nuevo colony. Number of animals tagged by age category and sex; YOY=pup/weaner (young-of-the-year) and Y=yearling. A total of 12 green tags plus 0 PIT tags were deployed on these animals.

age cat	female	male	sex unknown
YOY	0	0	0
Y	0	0	0
juv	0	0	0
SA	0	3	0
ad	8	0	0
Total	8	3	0

Re-tagged animals : Animals tagged in prior years (at any colony) then given a new tag in 2016 at the Año Nuevo colony. Number of animals singly- and doubly-tagged, adults/juveniles. The category 2+ includes a small number with 3 tags (5 were given 3 or more green tags; 0 were given 3 or more PIT tags).

PIT tags	Green tags	
	1	2+
0	3	8

Sighting Effort : Number of individual sightings and individual animals identified each year since 2003

Year	Breeding		Non-breeding	
	Sightings	Animals	Sightings	Animals
2003	3094	216	22	1
2004	3779	247	144	40
2005	4926	316	1782	280
2006	4229	321	1036	286
2007	2693	212	572	137
2008	1924	224	1273	302
2009	3072	232	835	217
2010	4931	261	2065	365
2011	7235	279	2190	370
2012	7259	316	2449	394
2013	9230	353	3617	417
2014	8270	376	3302	471
2015	6324	354	4009	594
2016	8154	395	472	116