

Population Monitoring of Elephants

Seals at Año Nuevo, 2022

R. Condit

Population : Estimates of breeding elephant seal female and pup populations, Año Nuevo rookery, 2022. Number of pups born estimated as $0.975 \times$ female number.

Area	Breeding females	Pups born	Pups weaned
Main point	1164	1135	1048
North point	332	324	292
Island	634	619	529
Total	2130	2077	1868

Weighing : Mean body mass in kg for elephant seals, Año Nuevo rookery, 2022. Sample size in parentheses. No correction for time since weaning date.

Age	F	M	unk
ad	365.8 (6)	NA (0)	396.0 (2)
juv	243.5 (3)	219.0 (2)	NA (0)
P	104.4 (15)	103.1 (17)	NA (0)
W	119.5 (118)	126.1 (128)	116.9 (5)

Female age distribution : Age and origin of breeding females whose tags were read, Año Nuevo rookery, 2022. 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 foreign-tagged females not shown, though some are known.

Origin	Age	Main Point	North Point	Island	Total	
Año Nuevo	3	3	0	0	3	
	4	14	9	0	23	
	5	14	3	0	17	
	6	25	6	0	31	
	7	13	2	1	16	
	8	15	8	0	23	
	9	7	8	0	15	
	10	26	2	0	28	
	11	4	5	0	9	
	12	2	2	0	4	
	13	5	2	0	7	
	14	0	0	0	0	
	15	1	0	0	1	
	16	1	1	0	2	
	17	2	1	0	3	
	18	0	0	0	0	
	19	0	0	0	0	
	20	1	0	0	1	
	21	0	0	0	0	
	22	0	0	0	0	
	Año Nuevo	known	133	49	1	183
		unknown	52	27	3	82
Gorda		1	1	0	2	
MM Center		1	1	0	2	
Piedras Blancas		13	5	0	18	
Point Reyes		0	2	0	2	
San Miguel		3	1	0	4	
San Nicolas		0	0	0	0	
unknown		12	11	1	24	

Newly tagged animals : Animals tagged for the first time in 2022 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 832 green tags plus 0 PIT tags were deployed on these animals. An additional 0 tags were voided, and 4 were observed on YOY but do not appear in the database.

age cat	female	male	sex unknown
YOY	232	261	12
Y	5	2	1
juv	4	2	0
SA	0	22	0
ad	0	6	0
Total	241	293	13

Newly tagged animals : Animals tagged for the first time in 2022 at the Año Nuevo colony. Number of animals singly- and doubly-tagged, adults/juveniles. The category 2+ includes a small number with 3 tags (4 were given 3 or more green tags; 0 were given 3 or more PIT tags).

PIT tags	Green tags	
	1	2+
0	28	14

Newly tagged animals : Animals tagged for the first time in 2022 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 (4 were given 3 or more green tags; 0 were given 3 or more PIT tags).

PIT tags	Green tags	
	1	2+
0	237	268

Re-tagged animals : Animals tagged in prior years (at any colony) then given a new tag in 2022 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 28 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	0	0
ad	0	0	0
P	2	0	0
W	19	2	3
Total	21	2	3

Re-tagged animals : Animals tagged in prior years (at any colony) then given a new tag in 2022 at the Año Nuevo colony. Number of animals singly- and doubly-tagged, adults/juveniles. The category 2+ includes a small number with 3 tags (12 were given 3 or more green tags; 0 were given 3 or more PIT tags).

PIT tags	Green tags	
	1	2+
0	2	17
1	0	6
2+	0	1

Sighting Effort : Number of individual sightings and individual animals identified each year since 2000

Year	Breeding		Non-breeding	
	Sightings	Animals	Sightings	Animals
2000	1693	177	30	0
2001	2942	276	53	16
2002	2486	219	77	17
2003	3041	224	18	1
2004	3514	256	144	40
2005	4554	328	1731	295
2006	4073	341	1009	317
2007	2641	225	542	151
2008	1836	237	1298	359
2009	3040	260	825	253
2010	4839	302	2014	414
2011	7021	313	2115	420
2012	6784	352	2353	439
2013	8727	387	3340	446
2014	7961	415	3145	512
2015	6085	376	3662	622
2016	7974	450	5109	638
2017	10756	480	3040	559
2018	11305	483	3890	571
2019	8321	466	3330	643
2020	11343	455	6845	659
2021	15735	592	13907	731
2022	12105	539	3624	460