

# Population Monitoring of Elephants

## Seals at Año Nuevo, 2023

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Population : Estimates of breeding elephant seal female and pup populations, Año Nuevo rookery, 2023. Number of pups born estimated as  $0.975 \times$  female number.

Area	Breeding females	Pups born	Pups weaned
Main point	1243	1212	1138
North point	292	285	192
Island	566	552	409
Total	2101	2048	1739

Weighing : Mean body mass in kg for elephant seals, Año Nuevo rookery, 2023. Sample size in parentheses. No correction for time since weaning date.

Age	F	M
P	125.6 (10)	120.0 (11)
W	119.6 (107)	123.3 (99)

Female age distribution : Age and origin of breeding females whose tags were read, Año Nuevo rookery, 2023. 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	MLAP	MLNP	ANI	PPB	PtReyes	KRW	Total	
Año Nuevo	3	3	2	0	1	0	0	6	
	4	5	4	2	1	0	2	14	
	5	13	6	0	0	0	2	21	
	6	14	2	0	0	0	4	20	
	7	27	3	1	0	0	1	32	
	8	13	4	0	0	0	0	17	
	9	18	6	0	1	0	1	26	
	10	11	7	0	1	0	0	19	
	11	18	0	1	0	0	0	19	
	12	3	2	0	0	0	0	5	
	13	4	1	0	0	0	0	5	
	14	4	1	0	0	0	0	5	
	15	0	0	0	0	0	0	0	
	16	1	0	0	0	0	0	0	1
	17	0	0	0	0	0	0	0	0
	18	2	1	0	0	0	0	0	3
	19	0	0	0	0	0	0	0	0
	20	0	0	0	0	0	0	0	0
	21	3	0	0	0	0	0	0	3
	22	1	0	0	0	0	0	0	1
	Año Nuevo	known	140	39	4	4	0	10	197
		unknown	49	20	3	0	0	212	284
SNI		0	0	0	0	0	0	0	
SMG		1	0	0	0	0	0	1	
Gorda		1	1	0	0	0	1	3	
PPB		7	0	0	0	1	7	15	
PtReyes		0	1	0	0	0	15	16	
SEFar		1	0	0	0	0	0	1	
KRW		0	0	0	0	0	10	10	
MMC		0	0	0	0	0	0	0	
unknown		12	7	3	0	0	209	231	

Newly tagged animals : Animals tagged for the first time in 2023 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 781 green tags plus 0 PIT tags were deployed on these animals. An additional 0 tags were voided, and 3 were observed on YOY but do not appear in the database.

age cat	female	male	sex unknown
YOY	250	235	7
Y	2	1	0
juv	1	0	0
SA	0	0	0
ad	2	0	0
Total	255	236	7

Newly tagged animals : Animals tagged for the first time in 2023 at the Año Nuevo colony. Number of animals singly- and doubly-tagged, adults/juveniles. The category 2+ includes a small number with 3 tags (3 were given 3 or more green tags; 0 were given 3 or more PIT tags).

PIT tags	Green tags	
	1	2+
0	218	274

Newly tagged animals : Animals tagged for the first time in 2023 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 (3 were given 3 or more green tags; 0 were given 3 or more PIT tags).

PIT tags	Green tags	
	1	2+
0	218	274

Re-tagged animals : Animals tagged in prior years (at any colony) then given a new tag in 2023 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 13 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
unknown	0	0	1
W	5	2	4
Total	5	2	5

Re-tagged animals : Animals tagged in prior years (at any colony) then given a new tag in 2023 at the Año Nuevo colony. Number of animals singly- and doubly-tagged, adults/juveniles. The category 2+ includes a small number with 3 tags (7 were given 3 or more green tags; 0 were given 3 or more PIT tags).

PIT tags	Green tags	
	1	2+
0	1	10
1	0	1

Sighting Effort : Number of individual sightings and individual animals identified each year since 2004

Year	Breeding		Non-breeding	
	Sightings	Animals	Sightings	Animals
2004	3514	257	144	40
2005	4554	328	1731	295
2006	4073	341	1009	317
2007	2641	225	542	152
2008	1836	237	1298	360
2009	3040	260	825	253
2010	4839	302	2014	414
2011	7021	313	2115	420
2012	6784	353	2353	439
2013	8727	388	3340	446
2014	7961	415	3145	512
2015	6085	376	3662	623
2016	7974	450	5109	638
2017	10756	481	3040	559
2018	11305	484	3890	572
2019	8321	467	3330	643
2020	11342	455	6845	659
2021	15734	592	13901	731
2022	15519	645	10875	804
2023	14920	687	5988	493