

Population Monitoring of Elephants

Seals at Año Nuevo, 2013

R. Condit

Population : Estimates of breeding elephant seal female and pup populations, Año Nuevo rookery, 2013. Number of pups born estimated as $0.975 \times$ female number.

| Area | Breeding females | Pups born | Pups weaned |
|-------------|------------------|-----------|-------------|
| Main point | 1183 | 1153 | 1084 |
| North point | 318 | 310 | 271 |
| Island | 535 | 521 | 436 |
| Total | 2035 | 1984 | 1791 |

Weighing : Mean body mass in kg for elephant seals, Año Nuevo rookery, 2013. Sample size in parentheses. No correction for time since weaning date.

| Age | F | M |
|-----|-------------|-------------|
| W | 117.0 (164) | 121.5 (146) |

Female age distribution : Age and origin of breeding females whose tags were read, Año Nuevo rookery, 2013. 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 | 1 | 1 | 0 | 2 |
| | 4 | 26 | 10 | 0 | 36 |
| | 5 | 4 | 4 | 1 | 9 |
| | 6 | 21 | 10 | 0 | 31 |
| | 7 | 9 | 1 | 0 | 10 |
| | 8 | 7 | 6 | 0 | 13 |
| | 9 | 2 | 0 | 0 | 2 |
| | 10 | 1 | 4 | 1 | 6 |
| | 11 | 5 | 2 | 0 | 7 |
| | 12 | 1 | 0 | 0 | 1 |
| | 13 | 4 | 4 | 0 | 8 |
| | 14 | 0 | 3 | 0 | 3 |
| | 15 | 5 | 0 | 0 | 5 |
| | 17 | 0 | 1 | 0 | 1 |
| | 18 | 2 | 0 | 0 | 2 |
| | 19 | 1 | 0 | 0 | 1 |
| | Año Nuevo | known | 89 | 46 | 2 |
| unknown | | 22 | 5 | 0 | 27 |
| San Miguel | | 5 | 1 | 4 | 10 |
| Point Reyes | | 3 | 0 | 0 | 3 |
| Gorda | | 1 | 2 | 0 | 3 |
| Piedras Blancas | | 8 | 5 | 0 | 13 |
| San Nicolas | | 1 | 0 | 0 | 1 |
| MM Center | | 1 | 1 | 0 | 2 |

Newly tagged animals : Animals tagged for the first time in 2013 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 975 green tags plus 388 PIT tags were deployed on these animals. (One of the pups was tagged at Piedras Blancas.) An additional 17 tags were voided, and 28 were observed on YOY but do not appear in the database.

| age cat | female | male | sex unknown |
|---------|--------|------|-------------|
| YOY | 249 | 205 | 41 |
| Y | 0 | 1 | 1 |
| juv | 7 | 4 | 1 |
| SA | 0 | 31 | 0 |
| ad | 22 | 7 | 0 |
| Total | 278 | 248 | 43 |

Newly tagged animals : Animals tagged for the first time in 2013 at the Año Nuevo colony. Number of animals singly- and doubly-tagged, adults/juveniles. The category 2+ includes a small number with 3 tags (2 were given 3 or more green tags; 0 were given 3 or more PIT tags).

| PIT tags | Green tags | |
|----------|------------|----|
| | 1 | 2+ |
| 0 | 35 | 14 |
| 2+ | 4 | 21 |

Newly tagged animals : Animals tagged for the first time in 2013 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 (2 were given 3 or more green tags; 0 were given 3 or more PIT tags).

| PIT tags | Green tags | | |
|----------|------------|-----|-----|
| | 0 | 1 | 2+ |
| 0 | 0 | 109 | 70 |
| 1 | 1 | 13 | 280 |
| 2+ | 0 | 0 | 22 |

Re-tagged animals : Animals tagged in prior years (at any colony) then given a new tag in 2013 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 25 green tags plus 44 PIT tags were deployed on these animals.

| age cat | female | male | sex unknown |
|---------|--------|------|-------------|
| YOY | 0 | 0 | 0 |
| Y | 1 | 0 | 0 |
| juv | 0 | 1 | 0 |
| SA | 0 | 7 | 0 |
| ad | 21 | 3 | 0 |
| Total | 22 | 11 | 0 |

Re-tagged animals : Animals tagged in prior years (at any colony) then given a new tag in 2013 at the Año Nuevo colony. Number of animals singly- and doubly-tagged, adults/juveniles. The category 2+ includes a small number with 3 tags (13 were given 3 or more green tags; 2 were given 3 or more PIT tags).

| PIT tags | Green tags | |
|----------|------------|----|
| | 1 | 2+ |
| 0 | 1 | 9 |
| 1 | 0 | 1 |
| 2+ | 3 | 19 |

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

| Year | Breeding | | Non-breeding | |
|------|-----------|---------|--------------|---------|
| | Sightings | Animals | Sightings | Animals |
| 2003 | 2927 | 186 | 21 | 1 |
| 2004 | 3779 | 201 | 144 | 32 |
| 2005 | 4926 | 261 | 1782 | 228 |
| 2006 | 4229 | 282 | 1036 | 262 |
| 2007 | 2693 | 183 | 572 | 124 |
| 2008 | 1922 | 205 | 1273 | 283 |
| 2009 | 3072 | 215 | 835 | 207 |
| 2010 | 4931 | 241 | 2065 | 347 |
| 2011 | 7239 | 263 | 2190 | 348 |
| 2012 | 7254 | 302 | 2448 | 375 |
| 2013 | 8761 | 338 | 1773 | 302 |