



California State Parks

Video Transcript



The Elephant Seals of Año Nuevo

Año Nuevo State Reserve, just forty miles south of San Francisco, is home to one of the most successful colonies of northern elephant seals on the Pacific Coast.

About three thousand of these animals are in year-round residence and return to breed on the beaches of this pristine park between December and March.

The bull elephant seals challenge each other, vying for highest rank in order to claim a group of females. They snort, bluff, and fight until one of the bulls relents.

And thousands of visitors are led across the dunes to get a close view of these one- to two-and-a-half-ton animals.

This is the story of Año Nuevo State Reserve.

Punta Año Nuevo, or New Year's Point, was named by the Spanish explorer Vizcaíno, who sailed by here January 3, 1603. This promontory point juts out into the Pacific Ocean and lies on the northern tip of Monterey Bay. This stretch of rugged coast has been shaped by oceans, wind, and movement of the earth's tectonic plates.

The ocean currents along the California coast have always brought rich nutrients because of upwelling--a phenomenon combining movement of current and winds that brings up the cold water from the depths off the continental shelf. With this upwelling come nutrients that attract fish. This, in turn, has attracted thousands of pelagic birds as well as a host of different shorebirds.

These rich waters also attract a variety of marine mammals, many of which can be found here year round, including sea lions, harbor seals, and elephant seals.

Small creeks that begin in the mountains behind the Reserve find their way down to the sea. The abundance of life here has continued for thousands of years because nature's flow has been left, for the most part, to carry on at its own pace.

The upland habitats of this four-thousand-acre reserve attract a variety of wildlife. One of the largest stands of monterey pine in California thrives here. And groves of redwoods and douglas firs stud the hills on the back of the reserve.

Flower farms that border the park attract other visitors, such as Anna's Hummingbirds.

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The beaches of Año Nuevo were once home to the Ohlone Indians--the first human inhabitants here. These shell middens were their kitchen table, where they cracked mussels and clams and also cleaned the fish that they caught offshore. They achieved a balanced relationship with their environment.

The Ohlone did not develop agriculture or acquire many material possessions. They did not need to. With the favorable climate, they benefited from an abundance of fish, game, and edible plants. The women used grasses to weave baskets for gathering and storage. The men used the available chert or imported obsidian for their arrowheads or spears. The Ohlones could build their shelters in a matter of hours using tule grass or tree bark and branches. The locations for their villages corresponded to wherever they spent most of their time. The seasons and availability of fish, water fowl or game dictated their movement inland and along the coast.

Because of the island at Año Nuevo and its sheltered beaches on the mainland, this location is ideal habitat for elephant seals, along with sea lions and nesting seabirds. These animals are relatively safe from predators here. The northern elephant seal's population has risen from a few animals to at least three thousand individuals. Because of their protection under new laws, and the presence of the state reserve, many of these seals breed here every winter from December through March.

The females arrive first. Most are pregnant and will give birth to their pups within a week. Other adult females will congregate, awaiting the outcome of the fights by the bull elephant seals.

Bulls challenge, fight, and chase each other to vie for a rank in the breeding process. Fights usually last only a few minutes, but can become bloody, drawn out affairs that can go on for an hour. Few of these fights result in death, but they are very exhausting for both animals involved. Because of the tremendous energy they exert in fighting, they can suffer from heat exhaustion and even heart attacks. This fight lasted almost 45 minutes before one relented to the other.

Once a bull dominates another, all it takes to keep the subordinated bull from intruding is a head lift, a certain look, or a low guttural vocalization with the head up.

This balance of nature at Año Nuevo has not always remained uninterrupted. Before the turn of the 18th century, many marine mammals inhabited these waters, including whales, sea lions, otters, harbor seals, fur seals, and elephant seals. But this marine ecosystem underwent dramatic changes with the invasion of whalers and sealers. The fur seals and the otters were hunted extensively for their fur. Whales and elephant seals were hunted for their fat that was rendered into oil. By 1840, most of the Ohlones were gone and so were many of these marine mammals because of over exploitation by European trappers and Yankee whalers. In fact, because the Russians were moving in from the north to exploit the sea otters, the Spanish responded under the direction of father Junípero Serra, by establishing a chain of missions up the coast of California.

During this time, little attention was given to conservation, and many of the animals were hunted almost to extinction. Because of the protection of marine mammals in the past fifty

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years, many of them have made a comeback, especially the elephant seals along this part of the California coast.

In order for an adult male to attain social rank, he must continue to posture, display and fight all challengers to establish his rank in the social hierarchy that determines how close he will be to the females. The top ranking male, or alpha bull, dominates the harem, or group of females. When a harem contains fifty females or less, the alpha bull can generally prevent all other males from approaching females. He may even sire fifty pups or more in a single year.

Elephant seals are not afraid of people. And this was a fact that contributed to their demise last century when they were killed for their oil. Today, however, this aspect of their behavior makes it easier to study these animals. Elephant seals return at the same time and place every year to breed. And this fact makes it easier for studying their behavior and biology.

Researchers from the University of California, Santa Cruz, weigh weaners, or young seals that have stopped nursing. The majority of these weaners will not feed or drink for two or three months until they have stopped nursing. It is also difficult to determine their sex unless the male's genital opening is visible. Three-hundred out of an estimated fourteen-hundred weaners will be tagged every year. Only seven-percent of the males will survive to breeding age. These young pups must still be handled carefully to avoid being bitten by their sharp canine teeth.

RESEARCHER WEIGHING YOUNG SEAL: Looks like 217.

NARRATOR: They are monitored throughout their lives and some have even been given names and numbers, bleached onto their skin for easier reference.

The State Reserve and its three hundred volunteer docents make it possible for thousands of school children and visitors to tour here every year. The Reserve's Visitor's Center is located in an historic barn built more than one-hundred years ago by the Steele Brothers. They operated a successful dairy at Año Nuevo. Their descendants eventually sold much of the land and buildings to the State. The State Reserve has utilized some of these buildings as rangers' residences, a visitor's center, and a staging area. This has enabled visitors, young and old, to appreciate the area for its natural history and for its historical significance.

GUIDE: Look at its teeth. What do sea lions eat?

STUDENT: They eat fish.

GUIDE: . . . and they rip them and tear them, so that's why they need those teeth.

NARRATOR: One of the rangers here is Frank Balthis. He talks about Año Nuevo State Reserve.

RANGER FRANK BALTHIS: The fact that Año Nuevo is a state reserve means that the wildlife and other features have maximum protection. As state park rangers, we ensure that there is a balance between protecting the resources and also providing education and

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interpretation. Guided walks come out into the dunes and observe the elephant seals during the winter. And docent naturalists provide interpretation during the other seasons of the year.

NARRATOR: Every year, beginning in spring, all elephant seals molt or shed their fur for a new coat. The juveniles are the first to molt. They are followed by the adult females. Molting takes approximately four to six weeks.

The bulls arrive later in the summer. Entire stretches of beach can be covered by clumps of fur left behind by the elephant seal molt.

These are younger bulls, probably between one and three years old. They become sexually mature at six years of age but will probably not have an opportunity to mate. So they will practice fighting, or play at it, whenever they can.

An alpha bull can command a large harem and be successful at mating with more than fifty females. However, a smart bull realizes that in order to maintain his control over the harem, he will sometimes have to give up some of the females around the edge of the group to other bulls.

The breeding success of a male depends on his timing. If he arrives too early he may be the top ranked bull but might tire out from all his fighting even before the females come into estrus. If he arrives too late, he will have to take on too many bulls in order to get a rank high enough to mate. The most successful males are the ones that are fully developed and older, because they stand the best chance of winning the battle over other younger and less developed bulls.

In any event, it is remarkable that none of the bulls that are mating will drink or eat for a period of three months, or the entire length of the breeding season. To eat or drink means that a bull would leave his females and risk losing his rank by other challenging bulls upon his return. It is not unusual for an adult bull to lose fifteen-hundred pounds by the end of the breeding season.

Elephant seals dive for their food, such as squid, octopus, small sharks, and other fish. They can stay under water for twenty-five minutes, diving to depths of fifteen-hundred feet or more.

The females live to be eighteen to twenty years old and are limited to having about eleven pups during their breeding lifetime starting at two or three years old. Females are so aggressively pursued by males, that by bunching together they reduce the frequency of being chased after by the mating males. Thus it is to the female's advantage to be in a harem and mated by one alpha bull instead of being pursued by many.

When a female gives birth, the new mother first turns to face the pup and nuzzles it. Then she begins to talk to it, so that it can recognize her call. If this social bonding does not take place and they become separated, chances are unlikely that they will find each other again, and the pup will die of starvation by abandonment. These hungry sea gulls devour the placenta, or afterbirth. And even pick at the pup's umbilical cord. Another peril pups face is the danger of being crushed by big males that don't bother to watch where they're going.

The milk consists of more than fifty-percent fat and this accounts for the pup's entire growth over the first few months. Mothers will not feed or drink any water for a month or more. So

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nursing drains forty-percent of their fat reserves, losing up to two-hundred-and-fifty pounds of their body weight. Females can give birth as early as three years of age. But most cannot wean their pups successfully then. Pups of young mothers often do not survive, whereas females six years or older have twice the possibility of successfully raising their pups.

The older females pick the safest places to have their pups, usually outside of a crowded group. These mothers are more experienced and have more fat and consequently give more nourishment to their pups. They are also usually more aggressive and will defend their pups from encounters with younger females.

A sign of a healthy pup is a fat one. Although they weigh only sixty to seventy pounds at birth, they will triple their weight in just one month. This growth gives the pups the best chance for survival past their weaning. Some of the pups are called super weaners because they grow to almost twice their normal size as a result of obtaining milk from other nursing females.

One of the dangers to pups is that storm surf can cause confusion among the harem and they can lose their mothers, be trampled by other adults, or drown in the surf.

Weaned pups begin approaching the water at about seven weeks old. They normally wade and wallow in tide pools and play for a week or more before they learn to float and swim.

Weather conditions change dramatically at Año Nuevo, which accounts for many shipwrecks in recent history. From Año Nuevo, a ledge extends seaward beyond the island that serves to break the ocean swell. Sailing ships from the 17th and 18th centuries sometimes could not see the shallow water in stormy seas or in fog. Ships would get caught in the rough surf and be broken up against the surrounding rocks. Many sailors have drowned here because of the rough surf and strong currents around the island.

In 1870 the federal government purchased Año Nuevo Island and nearby Pigeon Point. Lighthouses were constructed at both places in order to prevent further shipwrecks. The plan worked. However, when a steam fog whistle blew for the first time, the cattle mistook the sound for a wonderful new bull and all stampeded down to the beach to check it out.

Today, Año Nuevo's lighthouse is abandoned and the tower has since fallen down. The island and the old lightkeeper's house is now home to thousands of brown pelican, steller and California sea lions, and elephant seals. Some day this island may be restored to near its original state.

SUPERVISING RANGER GARY STRACHAN: In 1958 this could have been a developed area. But the people of California and the state parks system identified this as a unique coastal area to protect. Our job here is to ensure that the extraordinary natural and cultural resources at Año Nuevo are protected for generations to come.

Running Time: 29 minutes

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