



The  
**Sea Lion**  
in Los Islotes  
**Espíritu Santo**







# The Sea Lion in Los Islotes

## Espíritu Santo

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## THE SEA LION IN LOS ISLOTES, ESPIRITU SANTO

The Espiritu Santo archipelago is a group of protected islands and islets, known as Flora and Fauna Protection Area "Gulf of California Islands". One of the main touristic attractions of this insular complex and even La Paz city, is the presence of a California sea lion rookery (*Zalophus californianus*), called "Los Islotes" or "La Lobera" (the rookery), located in the north of the complex. It has the peculiarity of being the southernmost breeding rookery of this subspecies.



sea lion  
sea lion



nature  
nature



habitat  
habitat

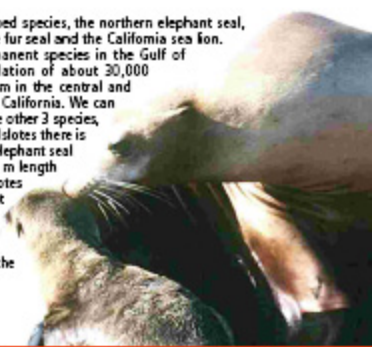




## SEA LIONS OR SEALS?

The sea lions and seals are members of the group called Pinnipeds (fin feet). The sea lions are different from seals, because of the presence of small ears, a sharper nose and they can walk using their four extremities. You could say that sea lions are more "terrestrial" than seals. A proof of this is their capacity to dive in relation to time. Sea lions can be without breathing under water a maximum of 20 minutes, while seals can do it for an hour.

In Mexico we can find 4 pinniped species, the northern elephant seal, the harbor seal, the Guadalupe fur seal and the California sea lion. This last one is the only permanent species in the Gulf of California, with a total population of about 30,000 individuals, being most of them in the central and northern islands of the Gulf of California. We can also find solitary members of the other 3 species, but this is rare. However, in Los Islotes there is an exceptional case, an adult elephant seal (*Mirounga angustirostris*) (5 m length and 2 tons) that gets to Los Islotes each spring or summer since it was a juvenile. Nobody knows the reason of this behavior, because there are no populations of this species in the Gulf of California.





México

Baja California Sur

Gulf of California

Pacific Ocean

3

## WHERE CAN YOU FIND THEM?

Sea lions can be found all along the Gulf of California. The sea lion rookery is located at the north of the archipelago Espíritu Santo (see map).




# ARCHIPELAGO ESPÍRITU SANTO



La Paz Bay

San Lorenzo Channel

BAJA CALIFORNIA SUR



## HOW IS AND HOW LONG IS THEIR BREEDING SEASON?

Los Islotes is a breeding rookery with about 400 California sea lions. Breeding season begins with pups being born at the end of May and ends with mating at the middle of August. Mothers give birth one pup each year, after an eleven month gestation, although it is active for only 9 months, because of the "delayed implantation". This means that the fecundated ovule doesn't hatch right away, it remains latent for 2 months. This way the pups always will be born at the same season each year. Once the pups are born, mothers fast for about 4-5 days, so that they can intensively feed their pups. This also will let them recognize each other when females return from posterior feeding trips. Lactation has a total period of at least one year.

Sea lions are polygynic. This means that reproductive groups are made, by an adult male and a group females. Males protect their territories from other males vocalizing and sometimes fighting, on the land or in the water. Because of this strong competence males can be very aggressive during the breeding season.

## WHAT DO SEA LIONS FEED ON?

The sea lions in the Gulf of California feed on more than one hundred fish species and some squids. In Los Islotes area they feed mainly on high depth species, for example the Eastern Pacific flagfin. Sea lions hunt in groups cornering their prey. This feeding behavior is carried on during night or at sun break, when many fishes and squids ascend near the surface and are more vulnerable and accessible.

In most of occasions sea lions feed near shore. Some surveys have been done from satellite observations in sea lions of Los Islotes. They have shown mean distances of about 30 km in the sea lions daily feeding trips, but they can move hundred of kilometers during their migrations, especially males.



## WHAT PROBLEMS DO SEA LIONS FACE IN LOS ISLOTES?

The main problem that these sea lions face is related to feeding. During their feeding trips, sea lions can find in their way fishing nets, sometimes getting caught. In other occasions they can draw or maybe release themselves, but taking fragments of the nets on their bodies, generally in the neck, causing wounds, infections or strangulation as the animal grows.

Unfortunately Los Islotes rookery shows the highest entanglement percentage in the Gulf of California. This is the reason why Centro Interdisciplinario de Ciencias Marinas (CICIMAR), Área de Protección de Flora y Fauna "Islas del Golfo de California" and the Santa Barbara Marine Mammal Center have created programs related to the rescue and unentanglement of sea lions, doing this approximately every six months. So far almost 40 sea lions have been rescued.

## THE CURIOUS BEHAVIOR OF SEA LIONS

Sea lions as well as whales and other mammals, show a curious attitude that has to do with exploration and/or playing. Pups and juveniles present this feature strongly. In occasions they can be seen biting the diver flippers or other strange objects. Juveniles have even been seen biting the big whale shark flippers. All this behavior is related, without a doubt, to learning and environment recognition.



## HOW CAN SEA LIONS BE DISTINGUISHED?

Sea lions have particular features associated to individual sex and age.

### 8.1 Adult males

Individuals are considered adult males when they are older than 9. They have a dark brown color, a 2-2.5 m length and their weight can reach the 500 kg. These males have a broad neck and a prominent sagittal crest, expressed as a big protuberance in the head, only present in this species.



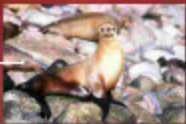
## 8.2 Subadult males

Subadult males are between 5 and 8 years old and they have similar color to adult males. They have a 1.5-2.3 m length and an approximated weight of 200 kg. Their neck and sagittal crest are not so prominent, compared to adult males. Many members of this category can be seen in Los Islotes between November and March, due to a winter migration related to feeding. It is thought that these animals come from rookeries from the central Gulf of California.



### 8.3 Adult females

Adult females are older than 5 years. They have a light brown color and a 1.4-1.9 m length. They have an approximated weight of 100 kg. Females don't have a sagittal crest or a broad neck like males. This is the most abundant category and also with the highest longevity (18-20 years) in a sea lion population. This is because they have a less risky lifestyle, they don't show a natural selection, to grow as much as males, that have a mean longevity of only 15-17 years.



## 8.4 Juveniles

The juveniles are animals between 1 and 4 years. They have a 1-1.3 m length and are physically/sexually immature. At this age it is not possible to distinguish a male from a female. Although lactation ends at the end of the first year, it is possible to see 2 or 3 years old juveniles feeding from their mothers, something not so usual in other seals or sea lions species.



## 8.5 Pups

Pups are animals of both sexes under one year old. They have dark gray or black color. Most of births in the Gulf of California are at the end of May until the end of July. When females are born, they have 75 cm length and a weight of 6.5 kg. Males are 1 kg (mean) heavier. Although lactation has a 1 year period, pups start feeding on some fishes and crustaceans when they are 8 months old. In that time (between the 8th and 12th month) many pups die, because they start spending much more time in the sea, becoming more available to predators and being also more probable to get sick or suffer accidents.

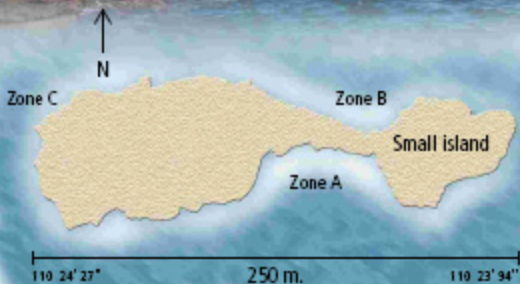




## WHY IS THE ROOKERY OF LOS ISLOTES INTERESTING?

Scientists have divided this small island in three main zones, A, B and C (Figure 1). The zone A and B are main sea lions reproductive areas. The zone C is an area that is used to be occupied only by "single males", that are very young or too old to reproduce. However at the recent time and because of the population growth since 1991, a part of this zone is being used for breeding as well.

Figuro 1. Los Islotos Map



## SEA LIONS AND TOURISM

In spite of the high number of visitors (30 thousand per year), it seems that the sea lions are accustomed to the boats, divers and swimmers. However, in order to keep enjoying this natural and unique show, it's necessary to follow some recommendations when the rookery is visited. Disturbing can alter the animals behavior, causing panic, stampedes and maybe the death of some pups.

Please follow these recommendations for your safety and the sea lion's:

- Don't disembark in Los Islotes and don't step on the rocks.
- Be passive when you are swimming with the sea lions. Let them be the ones that come to you.
- Avoid making loud sounds (speakers, air tanks).
- Report to our office the presence of wounded or entangled sea lions.
- Don't harass the sea lions looking for a better picture.
- Keep your boat including kayaks and anchor at a distance of 90 feet.
- Do not feed the sea lions.
- When swimming with the sea lions, do not approach closer than 15 feet to the main rookery area (zone A and B).





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