



## Spring 2014 Update

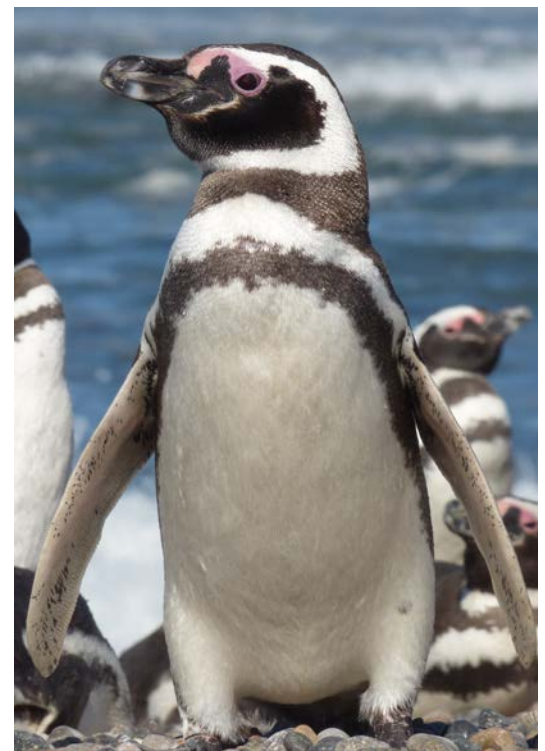


**The details gathered during 30 years of study of Magellanic penguins at Punta Tombo allow us to know and understand the lives of individual penguins. We are amazed at how a penguins' behaviors can be so similar to our own. Penguins work hard to find a nest and raise their young. How different is their behavior from people buying a home and raising a family? In this update, we share the details of a few penguin lives in 2013-2014 to show what we have discovered.**

### **THE GOOD SAMARITAN**

We witnessed a penguin help his neighbors in need. This "Good Samaritan" was a male penguin seen in October near a bush nest occupied by a pair of breeding penguins. The occupied nest was located in the Cañada, a narrow valley more than  $\frac{1}{4}$  km from the sea. The female in the nest was banded in 2001 in a nest less than 20 meters away. She moved to her current nest with more shade eight years ago and has been there ever since. In 2012, both of her chicks died. This season in 2013, a new male to the area moved in with her, and we banded him.

The Good Samaritan, banded as a chick in the Cañada in 1989, moves around within the Cañada and last successfully raised a chick in 2008. Since he hasn't had a mate for the last 5 years, he's been visiting and trying out several empty nests. He often keeps company with breeding females whose mate is at sea. During our first four checks on the Cañada in October 2013, we found the mated pair in their nest and the Good Samaritan nearby. Once the eggs were laid, the male left, and the female incubated the eggs which is the normal pattern for Magellanic penguins. The mates began switching off frequently in November after they both returned from their long incubation trips, a sign they were doing well and ready for the chicks to hatch.



On November 19<sup>th</sup>, the day before the first chick hatched, neither parent was in the nest. This is usually a death sentence, as gulls will eat eggs without a penguin in attendance. Much to our surprise, the Good Samaritan was incubating the eggs! We had seen him wandering around, but this was the first time he was in this nest. At 25 years of age, he sat on the eggs and hatched the first chick and probably was there when the second hatched. He brooded the chicks until both parents returned on the 21<sup>st</sup> of November with food to feed their chicks.



During the breeding season, the Good Samaritan hung around the nest and was occasionally seen inside the nest with both adults. He even helped the female drive away an aggressive unbanded pair that tried to occupy her nest. When both parents were away, the Good Samaritan sometimes stayed in the nest with the chicks. Both chicks fledged,

one on February 5<sup>th</sup> at 2.65 kg and the other on February 24<sup>th</sup> at 2.4 kg. The Good Samaritan's participation in guarding the eggs and young chicks likely saved their lives. By the end of the breeding season, the Good Samaritan had occupied the closest neighboring nest (about a meter away) with a recently banded female. He may have found his mate and nest for next season!

## BALLOON CHICK



On the 19<sup>th</sup> of December, nest 811L in the Cañada had two healthy chicks. The first chick weighed 550g, and the second chick weighed 440g. Over the next eight days, the attentive parents traded off every other day, guarding and feeding the rapidly growing chicks. An unbanded male was frequently seen in the nest, but nothing else seemed strange

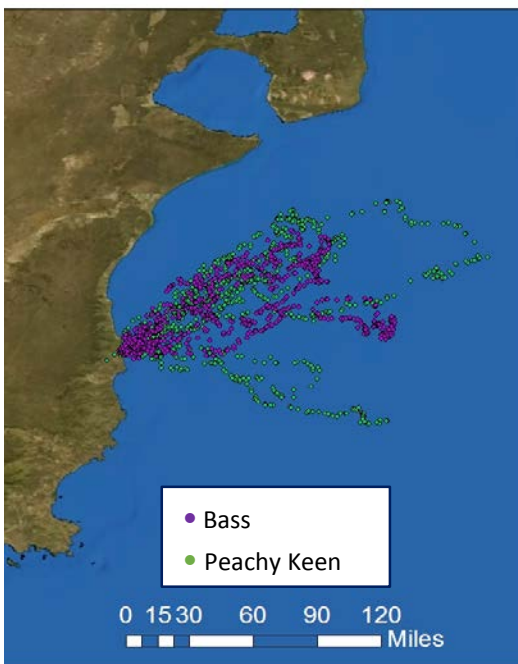
until December 27<sup>th</sup> when we pulled the chicks for measurements. Both chicks looked large, but the first chick weighed 1.7 kg while the second chick weighed less than a 1/3 of his sibling - a mere 490 grams. The lighter chick had blown up like a balloon and was nearly twice the size of the heavier first chick. Air was trapped under the skin. Balloon chick, as we affectionately called him, looked enormous but was as light as air. He stayed close to the adult probably because, unlike the older chick, he was hungry and needed more food. Moving was hard for balloon chick because his short legs weren't long enough to reach the ground, making it very difficult to maneuver during a feed. We went to town to get permission from the authorities to release some of the air under the skin, which seemed to help. Balloon chick might have recovered had the air been released sooner and the parents brought more food. We wondered if his large size made the parents think he didn't need more food. Balloon chick starved, but his sibling survived and fledged on the 20<sup>th</sup> of February at a heavy and healthy 4 kg.

## HOW TO WEIGH A PENGUIN

Thanks to funding from the Tortuga Foundation and the Wildlife Conservation Society, we field-tested four versions of a scale that records the weights of penguins entering and leaving the colony. Each new addition was better than the previous version, but we struggled throughout the season to get the system to provide accurate weights. When it got cold at night, the scale contracted, and penguin weights were half of what they should have been. Sometimes the scale malfunctioned without a clear explanation—the wonders of technology. We also had trouble with the penguins. When some penguins approached the scale, they stopped, had a good look at what was in their path, and then went around the scale, climbing over barriers and scrambling over rocks to avoid it. Over time, the penguins became more comfortable and confident walking over the scale. We got thousands of weights so we know the system works. The scale was designed to only record weights within 100 grams of the “real” weight of the penguin. To test the accuracy of the scale, we attached a field computer to see the weight according to the scale. When we had the weight of a single penguin, we caught the penguin and weighed



it with a spring balance. Sometimes the weights were the same and sometimes they were not. Mechanical engineering graduate students at the University are improving the scale so we can be ready for next year. The scale has a new feature that records the ID of penguins with an internal “bar code” when they cross the scale. We can’t follow each individual bird, but the scale and the reader provide an opportunity to track hundreds of penguins without touching them and determine the impact of offshore fishing. We have more kinks to work out before the scale and ID system can serve its full purpose.



*Figure 1. Foraging routes of two adult males with chicks under 20 days old. Bass fledged only one chick. Peachy Keen fledged two. All chicks in the 2013-2014 season fledged in late February, unusually late in the season.*

## THE 2013-2014 BREEDING SEASON

No year is the same for the penguins. In 2013-2014, we deployed 30 tracking tags at Punta Tombo and Cabo Dos Bahias. During incubation, many penguins foraged hundreds of kilometers from their nest. Some males went over 600 km; so far that their mates fasted for several weeks before their return. When the hungry females went to sea, they also foraged for several weeks in order to regain weight, so some chicks hatched before the female returned with food. When food is not available close to the colony, many chicks starve. Starvation in all years is the most common cause of chick death. A Marine Protected Area around Punta Tombo without fishing would help protect food for the small penguin chicks.

Our satellite data show that penguins raising small chicks often forage within 100 km (62 miles) of their nests, so a Marine Protected Area at Punta Tombo will help penguin chicks survive. Two of our satellite-tracked penguins, Peachy Keen and Bass, had to forage farther from the colony this year (Figure 1). Peachy Keen is a skilled forager and fledged two healthy chicks. Bass is a good forager, but his mate missed a crucial feeding, causing one of their chicks to starve on February 1<sup>st</sup>. Their other chick fledged later in the month.

## THANK YOU!

Your financial support makes our research possible and helps us make the world a better place for people and penguins. Your funding and love of penguins made 30 years of research, outreach, and conservation possible. Please continue to generously support the Center for Penguins as Ocean Sentinels by clicking and donating or sending your tax-deductible donation.

Thank you from me, the Penguin Sentinels crew, and all our penguin friends.

*P. Dee Boersma*



*David Coomes, Johannah Verhulst, Dee Boersma, and Turbo the penguin relax outside the cueva. Jan. 2014*

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