



CENTER FOR Ecosystem Sentinels

University of Washington



WHAT'S NEW

Exciting times at the Center for
Ecosystem Sentinels

- Indianapolis Prize 2018
Nomination

- Penguins of Patagonia Tour
2018

- Galápagos penguin breeding
bonanza

- 32-year-old penguin

- A HUGE egg

- How big is the Punta Tombo
colony?

I am thrilled to announce the *Center for Ecosystem Sentinels* is official. With the approval of the University of Washington Board of Regents, we are in a unique and exciting position because the University is committing to support long-term research of sentinel species. People care about sentinel species and they inform us about our world. Our mission statement is:

Wildlife is telling us the state of our planet. We listen. We take action.

The Center houses data for 45-years of work on Galápagos penguins and 35-years of work on Magellanic penguins. This is our base. In the future, we expect to include other long-term data sets on whales, sharks, birds of prey, and salmon. I hold the Wadsworth Chair in Conservation Science and I am raising funds for the Boersma Endowed Chair in Conservation and Natural History. The goal is to focus on sentinel species, long-term studies, conservation, and natural history.

I am so committed to see the Center succeed that this year I am matching any donation- dollar for dollar- up to \$70,000. Whether it is moving tanker lanes, making marine reserves, or informing the public, we seek to make the world a better place for wildlife and people through science, education, and public outreach. Help me make this dream a reality for the ages.

P. Dee Boersma



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EXCITING TIMES AT THE CENTER FOR ECOSYSTEM SENTINELS

In December 2015, Dr. Boersma signed a pledge to endow a Chair in Natural History and Conservation at the University of Washington. Endowed funds, including Chairs and Professorships, provide resources for faculty to invest in new opportunities and special projects. With a fundraising goal of \$5 million, this is no easy feat. Dr. Boersma pledged to donate \$2 million dollars over 4 years with a University of Washington matching gift of \$1 million. With contributions from supporters, such as the Tortuga Foundation, Namaste Foundation, San Diego Foundation, Kathryn Wagner, Mathew Johnson, and Ellen Pikitch, the endowment is over halfway to the \$5 million goal. Ecosystem sentinels tell us about the environment. The goal is to make the Center a world-class research facility - within the University of Washington - by using long-term datasets, persuasive communication of conservation science to the general public, mentorship of early-career scientists, and using quality science to inform the public and guide policy.

We are also excited to announce that Dr. Dee Boersma is a nominee for the 2018 Indianapolis Prize! The Indy Prize is the world's leading award for animal conservation granted to the most successful conservationist in the world. As a finalist in 2016, Dr. Boersma received \$10,000. She gave \$5000 to the Penguin Sentinels project and \$5,000 to the Global Penguin Society.

Click to learn more about Penguin Research at the Center for Ecosystem Sentinels <http://uwtv.org/watch/-X05KctkqkM/>



GALÁPAGOS PENGUIN BREEDING BONANZA

Dr. Boersma and her graduate student, Caroline Capello, with support from the David and Lucile Packard Foundation and Galápagos Conservancy, checked for breeding Galápagos penguins in July 2017 aboard Godfrey Merlen's boat, Ratty. Like their trip in February 2017, penguins successfully bred in the previous months with help from the La Niña nutrient-rich water. About 45% of the penguins they saw in July were plump, healthy juveniles. Two of the eleven active nests observed in Elizabeth Bay, Isabela were artificial nests we constructed in 2010. Penguins in these active nests were in many stages of breeding: courting, incubating eggs, and raising chicks. The breeding bonanza provided a vital boost to the population, but the population is still likely half of what it was before the 1972-73 and 1982-83 El Niño events. We hope the increase in breeding will continue into 2018 with the predicted La Niña this fall. The team will check nests again in February 2018 and share findings with locals, tourists, and our supporters.

Join Causana Viajes, on a 10-day tour of Patagonia to see three species of penguins: Gentoo, Magellanic and Southern Rockhopper. The trip will start in Buenos Aires on November 8, 2018, and travel along the coast of Argentina. You will travel with penguin expert, Dr. Dee Boersma and whale expert, Dr. Sue Moore. This is a rare chance to ask all of your penguin and whale questions and see South American wildlife with a small group – limited to 14 people. A highlight will be visiting Punta Tombo, Argentina where Dr. Boersma has studied Magellanic penguins for 35 years. Following a short flight, you will be at the southern tip of Chile for 3 days in Tierra del Fuego to view Gentoo penguins. The Patagonian adventure will end in Southern Argentina at Isla Martillo.

For more information, contact Carol Passera:
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PENGUINS OF PATAGNIA TOUR



TESTING SCALES AT THE WOODLAND PARK ZOO

Thanks to the Tortuga Foundation, we have four waterproof scales to weigh penguins at the Punta Tombo colony this year. Since the project began in 2013, we have collected over 500,000 Magellanic penguin weights. The weights recorded will tell us if the new marine protected area around Punta Tombo is providing penguins with more food. If so, we should have heavier penguins this year than in previous seasons. The scales work much like your bathroom scale—penguins step up, walk a few steps, and their weight is recorded. Thanks to the Woodland Park Zoo, we tested the scales before taking them to Punta Tombo. With the help of penguin keeper, John Samaras, Humboldt penguins walked across the scales so we could fine-tune the measurements. The scales also record whether or not a bird has a Radio Frequency ID (RFID) tag. Between October 5th and October 30th this year, 146 identifiable penguins we marked with RFID tags walked across the scales.



NEWS FROM PUNTA TOMBO

Our field crew arrived at Punta Tombo in September before egg laying and found the most vegetation we have seen in the 35 years of our study! The vegetation was flourishing making it hard to find nest tags covered by bushes and Pampas grass. On October 29th, we found the largest egg (by volume) out of over 32,000 eggs we have measured since the study began 35 years ago. Interestingly, the width is similar to the length of an average sized penguin egg! The female who laid the large egg is not particularly large. We wondered if she would lay a second egg since the first egg was so big. On November 1st, she laid a second egg of average size. This banded female is a good parent, as we know she has successfully raised five chicks since we began following her in 2008. We are excited to see if the eggs she laid this year develop into one or two healthy chicks.

Dr. Boersma was excited to see Turbo, the friendly penguin named after the Ford truck that he used for shade, on her arrival to Punta Tombo in October. But, she quickly learned that Turbo departed on a foraging trip. Turbo recently returned from his trip and you can see how excited they are to see each other!



32-YEAR OLD PENGUIN

Band #	Location	Date	Time	WT	BL	BD	FL	FT	Down	Nest type	
16104	SA	8 FEB	1800	3.05	4.84	1.71	14.7	11.8	L	1	96 98
16105	✓	✓	↓	2.85	5.20	1.79	14.9	11.8	1	1	
16106	✓	✓	↓	2.73	4.76	1.69	14.5	11.1	0	2	
16107	✓	✓	↓	2.60	4.52	1.71	14.0	11.4	0	2	

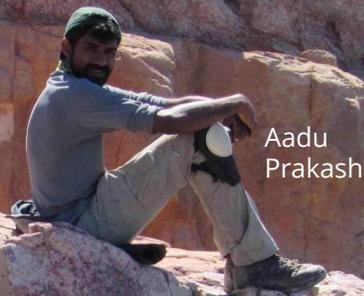
On February 8, 1985, members of the Wildlife Conservation Society volunteer group banded a penguin chick with the number 16107 at Punta Tombo. He weighed 2.6 kg, was in good body condition, and was ready to fledge. Thirty-two years later, on October 8, 2017, Dr. Pablo García-Borboroglu spotted 16107 in a bush nest at the San Lorenzo colony on the Peninsula Valdes, over 300km from Punta Tombo. His band number had not been recorded since he was banded as a chick. He is now 32-years-old and one of the oldest known birds in our database. The data volunteers help gather continues to provide us new insights and information. This penguin, like a few others, moved north to build the colony at San Lorenzo that started in the 1970s. He is closer to the fish at this new site and the colony is continuing to grow thanks in part to young birds moving from Punta Tombo.

HOW BIG IS THE PUNTA TOMBO COLONY?

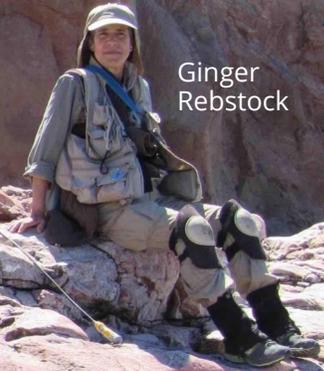
Our yearly stake survey, where we count penguins in 100m² circles around permanent stakes distributed throughout the colony, suggests that the colony has declined by about 40% since 1987. Dr. Brian Walker, who did his UW dissertation work at Punta Tombo, returned this year for some interesting follow-up studies, and helped the field crew find the outer limits of the 400 hectare penguin colony. In October. We walked the perimeter of the colony looking for the most-inland penguins, which we found were about 800m from the ocean. It took us four days and we walked more than 20 miles looking for penguin nests. While the total area used by the penguins is about the same as in the early 1990s, there are fewer penguins and the density has decreased.



Thank you



Aadu
Prakash



Ginger
Rebstock

Des
Thomaier



Dee
Boersma



We couldn't do a field season at Punta Tombo without the help of many locals and your support. The La Regina family (local landowners) help us daily and provide great company as do Elvio, Paula, and Jorge M, a few of the Guardafaunas at Punta Tombo. A big thank you to Graham and Patricia at the Wildlife Conservation Society, Pablo García-Borboroglu of the Global Penguin Society, and the staff of the Offices of Tourism and Flora and Fauna in Rawson. Lastly, a big thank you to our followers and supporters.

WE NEED YOUR SUPPORT

Please consider a tax-deductible donation to the Center for Ecosystem Sentinels. Support of our work allows us to track penguins at sea, continue to measure the success of conservation strategies, and educate and train the next generation of students in conservation.

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