

## What it's like counting 528,000 albatross nests on Midway islands

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Nancy Caruso sat on an island in the North Pacific Ocean just inches from an albatross and watched as the large black-and-white sea bird with a 12-foot wingspan added grass to its nest to cover up a precious 4-inch



white egg.

Each year, albatross pairs—mated for life unless a partner dies—typically have just one egg. The eggs incubate for 60 days and crack open in the fourth week of January. From then, the chicks spend six months on the islands of the Midway Atoll, growing and learning to fly.

The massive seabirds spend their lives on their wings, soaring up to 500 miles a day and cruising at 80 mph with barely a flap, so developing flight skills are critical to survival. They are known to travel incredible distances without rest and are rarely spotted.

So seeing the birds close up and "being part of their tribe" was a once-in-a-lifetime experience for the Orange County marine biologist who usually spends her time researching marine life closer to home off the Southern California coast and educating local students. Caruso, of Cypress, was part of a team of 12 citizen scientists who recently spent six days a week for three weeks counting albatross nests on the Midway Atoll.

Just back from the month-long trip, Caruso has been sharing what she learned with students at local middle schools. The lesson includes fascinating tidbits about the albatross, but also how plastic pollution and entanglements from fishing lines, hooks, and nets are a real threat to the birds. She also tries to inspire students to think about volunteering as citizen scientists—much of her research is done with the help of hundreds of volunteers.

"I was handing them pieces of grass," Caruso said of her recent experience as one of a dozen volunteers helping United States Fish and Wildlife officials with their annual albatross nest count on the U.S. territory island. The atoll is home to at least 70% of the albatross



population and is known for its use during World War II and the battle that secured it for the U.S.

"They'd go about their business preening and they'd talk to their egg," Caruso said. "I'd sit and watch them do their dances. There aren't many places in the world where you can be among them."

## **Counting albatross annually**

The wildlife department—along with the Friends of Midway Atoll—have kept track of the elusive seabirds since 1991 after the U.S. Department of the Interior took over monitoring the atoll's islands from the Department of Defense when a Navy base was shuttered and the islands became a marine sanctuary and national historical monument.

The count starts in December and must be completed in 21 days by the Nesting Albatross Census Team, which tracks two species of seabirds on the island: the black-footed albatross and the Laysan albatross.

The charter plane Caruso took from Honolulu to the islands landed in the dark of night to avoid the birds. The group was picked up in golf carts and bunked in old military barracks. After breakfast early the next morning they rode bikes along gravel paths to get their gear and start counting.

The gear included snow shoes because another of the island's birds, the Bonin petrel, burrows deep tunnels into the ground to nest.

"Every step you take, you could fall into a hole up to your waist," Caruso said. "Then you'd have to get up and dig the bird out."

To start the count, the volunteers, who came from different backgrounds and from across the nation, formed a line standing five feet apart and



systematically moved along, passing nesting adults and counting each nest with a clicker.

"We'd get to the endpoint and then go back the other way," Caruso said. "We covered the entire islands and I walked 196 miles."

After 21 days—volunteers got Sundays, Christmas and New Year's Day off—the census group had counted 29,562 black-footed albatross and 498,448 Laysan albatross nests for a total of 528,010 nests. About 80% of the eggs typically hatch, but only about 30% of fledglings survive.

An estimated 1.5 million albatross live on the atoll, which once was three islands but two merged as geography shifted, said Dan Cullinane, a retired biology and chemistry teacher from—coincidentally—Midway City, who lead the count this time.

This was Cullinane's third time participating in the census count.

"It's nice to be able to walk among the albatross, and you're counting more than 500,000 nests," he said, adding that since the birds have no natural predators on land, they are not fearful of humans. Heat and dehydration—if chicks can't be found when the parents return to feed them—are the biggest enemies of the chicks growing into fledglings.

"It's hard for the people on the island to see so many birds die," he said of the 40 or so refuge staff members, contractors, and volunteers who live on the islands year-round.

## Doing the albatross dance

Caruso, Cullinane and the others were treated to a show by the albatross—the seabirds' mating dance.



Young birds do not return to land until their third year after fledging. When they return, they don't breed at first, but instead learn to perfect their dance moves, build nests and look for a possible mate. Birds first breed between 5 and 8 years of age.

The dance is done to identify their mate of choice; the better the dance, the more coveted they become. The dances are complex with several moves.

Once mated, they finetune the dance and use the moves to identify their partner when returning to Midway to mate again, Cullinane said. After a chick fledges, the pairs separate for the rest of the year and return to Midway when it's time to breed, he said.

Birds who lose a mate, either because it doesn't return to Midway or suffers some other fate, have to go through a new courting process.

Such is the case with Midway's oldest bird, Wisdom, said Cullinane. Famous among birders, Wisdom was first banded by scientists in 1956. She was seen dancing again, on the prowl for her third mate. But age becomes her well, Cullinane said, because she looks physically no different than younger birds.

## **Sharing the experience**

While Caruso was wowed by the albatross's fascinating life and how the seabird has evolved over millions of years, a sad discovery was the tremendous amount of trash and debris she and others picked up from around bird nests and beaches. Along with litter washing ashore, the seabirds often pick up plastics from the ocean.

She had bags of littler with her when she recently took her presentation to eighth-graders at Vista View Middle School in Fountain Valley. She



said many were "slack-jawed" by what she shared, especially by the albatross dance moves.

"The students really loved the ones where the birds put their beaks into their armpits," she said. "They were attentive and amused."

But, even more thrilled was Daryth Morrisey, who teaches science and marine biology to the middle schoolers. Eliminating single-use plastic is a message she said she wants to deliver loud and clear to her students.

"I start off the year with a plastic pollution unit," she said. "To actually have Nancy see those incredible birds is amazing. To gift me a piece of regurgitated plastic from an <u>albatross</u> is a priceless teaching tool."

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