



Shorebird

The AZA Charadriiformes TAG'S Newsletter 2016

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TAG MISSION

The mission of the Charadriiformes Taxonomic Advisory Group is to coordinate management of captive Charadriiformes in North American collections, as well as participate in and support relevant conservation efforts.

AZA Charadriiformes TAG

AZA Charadriiformes Steering Committee

Chair: Cindy Pinger, Birmingham Zoo
Vice-Chair: Aimee Greenebaum, Monterey Bay Aquarium
Treasurer: Stephanie Huettner Omaha's Henry Doorly Zoo & Aquarium
Secretary: Cody Hickman, Chicago Zoological Society/Brookfield Zoo
Tom Schneider, Detroit Zoo
Debbie Zombeck, North Carolina Zoological Park
David Oehlar, Bronx Zoo
CJ McCarty, Oregon Coast Aquarium
Aimee Greenebaum, Monterey Bay Aquarium

Advisors:

Veterinary

Dr. Stephanie McCain, DVM, Birmingham Zoo
Dr. Terry Norton, DMV, St. Catherines Island Center

Education

Sarah-Mae Nelson, Monterey Bay Aquarium

WCMC Liaison

Harrison R. Edell, Dallas Zoo

Program Leaders:

Cindy Pinger, Spotted Dikkop, Birmingham Zoo
Diane Lavsa, African Jacana, National Aviary
Phillip Horvey, Masked Lapwing, Sedgwick County Zoo
Mark Myers, Spur-winged Lapwing, Woodland Park Zoo
Sara Perry, Common Murre, Tufted Puffin, Horned Puffin, Seattle Aquarium
Stephanie Huettner, Atlantic Puffin, Omaha's Henry Doorly Zoo & Aquarium
Carmen Murach, Black-necked Stilt, Northeastern Wisconsin (NEW) Zoo
Sunny Nelson, Inca Tern, Lincoln Park Zoo

Species Champions:

Aimee Greenebaum, Snowy Plover, American Avocet, Monterey Bay Aquarium
CJ McCarty, Black Oystercatcher, Oregon Coast Aquarium
Travis Garret, Egyptian Plover, Denver Zoo

AZA Charadriiformes TAG Update

Shorebirds & Alcids Animal Care Manual

The Shorebirds ACM is complete and posted. This document can be viewed on the Charadriiformes TAG animal program page on the AZA website. The Alcid ACM is in the review process.

Avian Scientific Advisory Group Species Fact Sheets

Black-necked Stilt, Spotted Dikkop, and Inca Tern fact sheets are posted on the Avian Scientific Advisory website.

TAG RCP

The Charadriiformes TAG Regional Collection Plan is in progress.

Charadriiformes TAG MART

The Charadriiformes TAG will be selling goods again this year at the Mid-Year Meeting. We were successful last year selling hand-crafted jewelry, prints and other fun things. Below is some pictures of items sold and we are adding more items this year so, please come and visit. The proceeds from 2015 and 2016 was donated to The Wetland's Institute - reTURNing the Favor Program.



reTURNing the Favor for Horseshoe Crabs

Allison Anholt- Research Scientist, The Wetlands Institute



The reTURN the Favor program works to make the beaches of New Jersey safer for the thousands of horseshoe crabs that spawn annually between May and July on the Delaware Bayshore, located on the southwest border of New Jersey. The Delaware Bayshore is home to the largest spawning concentration of horseshoe crabs in the world. Many species of arctic-nesting shorebirds, such as the federally threatened Red Knot, stopover on the Delaware Bay during the height of the crab spawning season in order to forage on the abundant horseshoe crab eggs. However, the crabs face many hazards during spawning. Most crabs die by becoming overturned by wave action, which exposes them to desiccation or predation by large gulls. Many other crabs die upon being caught in natural or manmade structures such as jetties or old housing structures. In response to these problems, the reTURN the Favor program was begun in 2013.



Because many spawning beaches are closed in the spring to protect shorebirds from disturbance, and because there is no harvest of live or dead horseshoe crabs in New Jersey, the program has many restrictions for how, where, and when walks can be conducted. These restrictions provide a framework that helps protect shorebirds while still rescuing at-risk horseshoe crabs. Nine partner organizations sponsor beaches with high spawning numbers and recruit and train volunteers to conduct rescue walks following program protocols. While rescuing crabs, reTURN the Favor volunteers identify hazards, known as impingements, and tally overturned and impinged crabs.

Since its inception in 2013, more than 1,700 reTURN the Favor volunteers have conducted 1,038 walks and committed 3,997 volunteer hours. This effort has achieved the amazing result of over 145,000 crabs rescued!

The reTURN the Favor program has gained momentum since its founding four years ago. The Steering Committee, comprised of members from The Wetlands Institute, Western Hemisphere Shorebird Reserve Network, New Jersey Division of Fish and Wildlife, and Conserve Wildlife Foundation of New Jersey, collects data, compiles reports, and sets priorities for upcoming projects. Each year, volunteer effort, walks, and awareness have increased, with the result of more crabs in more locations getting the help they need.

As we have found, this program provides many important benefits beyond the direct rescue of overturned horseshoe crabs.

Perhaps the most important result in our four seasons of experience has been the identification and quantification of impingements which trap crabs.

Impingements can be old construction debris, jetties, run down bulkheads, and anything that can entrap a crab on the beach. Just how big is this problem? Of 145,000 crabs rescued, almost 28,000 of them were stuck in manmade impingements. These losses are largely

preventable. Armed with this knowledge, we have been undertaking small scale restoration projects focused on fixing these hazards and removing some of this debris. Continued momentum of this program will allow us to identify other ways in which to help the horseshoe crabs, the Bayshore, and the shorebirds and other species that depend on them.



Want to learn more about saving New Jersey's horseshoe crabs? Visit or get involved at returnthefavornj.org



Hallway to Conservation – Western Snowy Plover, *Charadrius nivosus nivosus*, Conservation at the Santa Barbara Zoo

By Rachel Ritchason, Santa Barbara Zoo

The picture of conservation is often the release of an animal – an opening of a crate or the flash of it disappearing into its natural habitat.

But conservation is also hours of writing permit proposals. It is communicating with government officials who have the responsibility of maintaining the quality of care given to wild animals.

Conservation is finding money, buying equipment, training staff, and building relationships with other organizations invested in the species.

Yes, conservation is also the release, the photo op and the article written later, but the process of conservation is so much more.

Here's what it was for the Santa Barbara Zoo when we started a new conservation program to rear and release abandoned Western snowy plovers – an ESA Threatened species listed as a Bird Species of Special Concern in California. They breed nearby along the coast, and their main threat during breeding is human disturbance.

Getting started, we had to consider that as a smaller sized zoo, we don't have extra space. For anything.

Our hand-rearing space is a hallway-like room in our veterinary clinic, which also is an incubation room, surgery recovery, and storage space.



Despite space limitations, we've had great success rearing and caring for a variety of species in this space including Chilean flamingos, Humboldt penguins, a variety of waterfowl and pheasant species, and now Western snowy plovers.

Like our spaces, our staff also work to fulfill more than one function. I am the Curator of Birds and also the Registrar.

So, when I presented the idea of this new conservation program, I gave myself two new tasks: preparing for the husbandry of the program, and obtaining the permits necessary for the work.

Photo Credit: Santa Barbara Zoo

The project was approved in summer 2014, and I think photos of fluffy little plover chicks may have helped. They are certainly very cute! I got to work on the permits first, as experience has taught me that is the longest part of the process.

I started by calling state and federal permitting officials to find out what was needed. The permitting process is never a straight line - more like a jungle gym – and often I was referred to other people in other departments. I submitted paperwork, and again spent hours on the phone with representatives of the state and federal government. I cannot express my respect for their work enough. Our lengthy conversations are when they got to know me, my staff, and the Zoo's commitment to starting a new conservation program.

In the end, I applied for permits at three state and federal agencies. We worked with a local rehabilitator to be sub-permitted because the Zoo does not hold a rehabilitation permit. It took nearly 18 months to get all the permits in order. (Ok, go hug your registrar now...or bring them goodies.)

We missed the entire 2015 breeding season while waiting for permits, but my team used this time to train and gather all the physical materials we needed.

We purchased an entire set of incubation and hand-rearing tools (incubator, AICU, holding tubs, dishes, etc.) to use so we could isolate the wild plover eggs and chicks from our collection animals. We identified a place for and built a flight cage that was out of the way so chicks saw as few people as possible. Keepers and Veterinary staff made trips to the Monterey Bay Aquarium to train with their aviculture team who has been rearing and releasing this species for over ten years.

Western snowy plover breeding season starts in March/April along the California central coast. In early spring of 2016, as the Western snowy plover breeding season started, I reached out to all the conservation partners I knew, saying “We are ready, and here to help.”

The very next day I got a call from Jessica Nielson at Coal Oil Point Reserve, a local plover breeding habitat! I drove to Coal Oil Point on May 1st to pick up a newly hatched chick. Jessica had incubated its egg after finding it alone on its nest. On May 17th, we received a second chick from the same area, whose egg had been shoved out of its nest when disturbed by a skunk or a raccoon.

With the husbandry protocols in place, training done and supplies ready, our team moved into action and successfully reared these first two chicks. They went through each development stage, were eventually ready to fly, and ready for release on June 23, 2016.

Down by the Delaware Bay

Deb Dial
Senior Aviculturist
National Aquarium
Baltimore, Maryland



Every May, spawning of the Atlantic horseshoe crab (*Limulus polyphemus*) on the Delaware shore coincides with the arrival of thousands of migrant shorebirds. Among the waxing and waning tides, the horseshoe crabs deposit their eggs in the sandy beaches before returning to the water. As more crabs lay their eggs, more and more eggs are churned up from the sand, unveiling a smorgasbord of protein rich food for the weary shorebirds. At the time they arrive in Delaware Bay, the dunlin (*Calidris alpina*), semi-palmated sandpipers (*Calidris pusilla*), ruddy turnstones

(*Arenaria interpres*), red knots (*Calidris canutus*) and sanderlings (*Calidris alba*) have traveled 7,000 of their 8,000 mile journey. Before continuing the last portion of their migration from South America to their breeding grounds in the Canadian arctic, the birds must stop at the Delaware shore to eat and gain energy – they will double their weight in about two weeks.



As the birds move into their temporary home on the Delaware shore, so does a team of dedicated staff and volunteers. The international team monitors the numbers of birds and identifies previously banded/flagged individuals. Some birds are captured, weighed, and, in many cases, flagged. Information collected is used to determine the health of the local ecosystem and the migrant bird populations.

In Spring 2016, 1,738 birds representing 6 species were flagged in Delaware by the Shorebird Project's staff and volunteers (DSP, 2016). The team were also able to re-sight 3,707 flagged individuals representing those targeted species. Although the majority of flagged birds were flagged in the United States (dark and lime green flags), the group also identified birds that had been flagged in Argentina, Brazil, Canada, Chile, Mexico, Suriname, and the Caribbean. (DSP,2016)

We Need You!

A wonderful opportunity exists for professional aviculturists from the zoo and aquarium field to join this well-established in-situ project on the Delaware Shore.

Interested?

Please contact deshorebirds@gmail.com (note response may be spotty outside of the shorebird season)

For zoo/aquarium staff needs please contact Deb Dial, ddial@aqua.org

*Numbers courtesy of Delaware Shorebird Project, Field Season Report (2016)



Trials and Tribulations Breeding Black-necked Stilts

By: Mindy Rabideau, Primary Aviculturist

Tracy Aviary

Salt Lake City, Utah

At the beginning of the 2016 breeding season, Tracy Aviary housed 2.2 black-necked stilts (*Himantopus mexicanus*). These birds, along with other native wetland birds, are housed in our large walk-thru Kennecott Wetlands Immersion exhibit. Attached to the exhibit is a holding building with a few holding runs, a keeper door, and a run open to the exhibit where the birds are fed.

In April two of the birds paired and by the end of April they were no longer tolerating the presence of the other female. The pair would confine the female to one small portion of the 30 x 80 ft² exhibit. They were also displacing the other male, but were more tolerant of his presence. We ended up moving the second female out of the exhibit, but were able to keep the second male in the exhibit as the pair allowed him to use roughly

half the exhibit without harassment. The extra female ended up being sick and passing away shortly after, so they may have been more intent on displacing her for that reason.

The pair began nesting in early May. Their nest location was an area with some dead leaves and grasses located very close to the run the exhibit birds use to access the holding building. Two chicks hatched on the same day in the end of May and a third hatched two days behind the first two. One of the first chicks went missing right around the time the third one was hatching (potentially predated by a cage mate). The third chick was very weak after hatching and despite offering supportive care, that chick did not make it. The pair successfully raised one chick this season (their first nesting attempt).



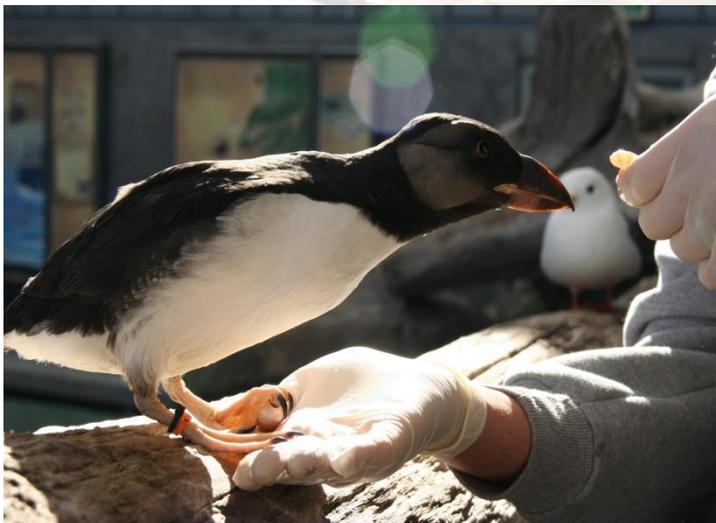
The nesting of the stilts this year caused many challenges as a keeper. For one, the stilts chose a nest location close to where the exhibit birds were used to accessing their food and would not let even the largest bird in the exhibit (American bittern) in to eat. We had to find places around the exhibit far enough from the nest, but also in shady areas to allow the exhibit birds to eat. Another challenge was keeping a close eye on the interactions between the pair and the outcast male stilt in the exhibit to make sure they weren't harassing him too much and allowing him to eat. The pair only showed aggression to the other birds in the exhibit (including other shorebirds) when they would come close to the nest, but would actively chase the extra male away even when he would be 20+ feet from their nest. When the stilt chicks were downy, their response to a nearby keeper would be to crouch down and not move. Placing the chick diets close enough to the nest for the family to feed while being yelled at by the parents (and sometimes attacked) while taking very careful steps to avoid where the chicks were hiding was also challenging. Once the surviving chick was big enough and exploring the exhibit more the parents were guarding the nest site less and we were able to go back to feeding the exhibit birds in holding. Displacement against the extra male also decreased, but was still happening. Recently we dispositioned the chick and the extra male in hopes that next breeding season will be somewhat easier without having to worry about the stilts not part of the pair.



Alaska SeaLife Center - Educational Puffins

Kristen Pelo
Avian Coordinator
Alaska SeaLife Center

Our live-animal education program started in 2005. Our education birds are all hand-raised, and have shown an interest in spending time with the keepers and participating in our education program. The basic behavior we start with is targeting at a half wiffel ball. This is a simple and easily-learned behavior that begins the process of teaching the animal that when it performs a task, it gets a reward. When this behavior is consistent, we introduce the platform and begin the process of training the animals to step onto the platform, and station there while we walk around. We then move to getting the birds to appear comfortable and safe on the platform in many different situations.



We do not have separate housing for our education animals, rather they are given the opportunity to interact with our breeding flock and choose mates. This can make for a challenging dynamic in the summer when our education birds could potentially be incubating eggs or aggressive.

Horned puffins can be particularly territorial and/or aggressive during the breeding season while they defend their burrow entrances. We have found that our educational Horned puffins tend to be much less aggressive if they're given the opportunity to go

through the breeding process, and in years we don't want a particular pair to hatch a chick and raise young, we give them dummy eggs for the incubation period. Also, the more consistent we are with the consistency of our training program, the animals perform much more consistently and it reduces instances of aggression. Aggression can include head tossing, mouth gaping, and aggressively growling at keepers. We do not proceed with training sessions if animals present these behaviors, but rather end the session and try again later when the animal is not presenting aggressive behaviors. Consequently, we only proceed with positive reinforcement when animals are initially producing positive behaviors.

All our education animals are trained to do the following basic behaviors: step onto a platform we use for educational purposes, step onto a keeper's hand, station on said locations while being carried around a room, get onto a scale, step into and out of a kennel on command, and show a wing display on command

Tufted puffin:

We have one educational Tufted puffin, a female named Dory. She is 11 years old this year and has never chosen a mate, although she has lived in a habitat with single males. She was hand raised and seemed to enjoy her time with the keepers, so she entered our education program as a fledgling. She works readily for most of our keepers once a solid relationship is established. She seems to thrive off attention from the public, such as getting her picture taken, so she makes a valuable education animal.

Horned puffin:

We have 3 Horned puffin educational animals. All three were hand raised and seemed to enjoy their time with the keepers, so entered the education program as young pufflings. While all 3 are still very active members of our education program, they have chosen mates and raised chicks in our aviary.

Rain: A male hatched in 2004, he is 12 years old this year. He is a very reliable bird, and is willing to participate in programs at almost any time throughout the year unless he's actively incubating an egg or in his month-long primary molt in the spring. One of the behaviors we are working on with him is growling (the sound puffins make from their burrows in the breeding season) on command.

Nemo: A male hatched in 2005, he is 11 years old this year. He actively seeks out training opportunities and is trained on circuits around the habitat and in our keeper areas. He also actively participates in programs throughout the year unless he is incubating an egg or molting his primaries.

Aleutian: a male hatched in 2007, he is 9 years old. He is not as active in our training program as the other two HOPU, as he gets very territorial during certain periods of the breeding season. However, outside of the breeding season he is an excellent education animal.

Rhinoceros Auklet:

Klinger is our only current educational auklet, He hatched in 2006 and is 10 years old this year. Along with all our initial auklet population, he was originally a research animal and participated in a high fat/low fat chick developmental study. When the study was over, Klinger joined our general aviary population. He, however, really enjoyed interacting with the keepers and most likely became imprinted as a result of the study. He has consequently become our most reliable presentation bird. He thrives off of presentation opportunities in the summer will wait by the keeper entrances in order to get the chance to get in the kennel and go to presentations.





Other than our education animals who participate in live-animal programs, we also train our flock as a whole to step onto a scale each day. We go onto the habitat with a scale, and about 80% of the 83 birds we house are trained to get onto the scale so we can get their weight. When they step onto the scale, they receive a fish as a positive reward (the first fish always has a vitamin so we can keep track of who gets their vitamins each day). This allows us to closely monitor the health of our population, get medication to birds who might be sick or injured, and watch for egg-heavy females during the breeding season. Training a flock of seabirds this big to step on a scale on the rockwork was a long and time-consuming process, but has been incredibly helpful for the keepers to watch the health of the flock.

We also do puffin paintings with our birds that want to participate. We put paint and mattes on the floor and the birds walk through the paint, then walk on the matte and we sell their creations in the lobby.

2016 Breeding Season Pictures



Spotted Dikkop - Los Angeles Zoo

Photo Credit: Leah Flores



Horned Puffin “Darwin” – North Carolina Zoo

Photo Credit: Polar Bear Keeper Karen Warda

Photo Credit: Seabird Keeper Sarah McCrory

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<https://www.facebook.com/shorebirdTAG>**

If you have any ideas for next year or interested in writing an article please contact Cody Hickman at hickmanjc02@gmail.com.