



The Shorebird

The Charadriiformes Newsletter

2019

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TAG UPDATE

Hi folks!

I wanted to give a quick update on things we have been working on. First, I am excited to announce the Alcid Animal Care Manual has been published! This process has taken years and I want to thank all of you who helped out. Please check it out on the AZA website.

I am sad to announce our Secretary, Cody Hickman from Tulsa Zoo, has stepped down from his role with the TAG. He has done a wonderful job over the years and we will miss working with him. Thank you Cody for all your help over the years!

We are making a change to one of our programs, the African jacana. It had been listed as a candidate program but due to a variety of reasons, we have decided to de-list it and have it be an unmanaged program.

We are continuing to sell items at the AZA midyear TAG mart. If you are at the conference, be sure to stop and check our stuff out! All the money raised goes towards shorebird conservation.

Want to get more involved with the TAG? Here are a few ways you can help:

- **Like our Shorebird Facebook page**
- **Calling all artists: we are looking for folks to donate items for the TAG mart.**
- **We are looking into the possibility of doing visitor research on alcid exhibits. If this is something you could help with, please let us know.**

Please feel free to reach out to me if you have any questions or want to get involved.

**Thanks,
Aimee Greenebaum
agreenebaum@mbayaq.org**



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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.

COMMITTEE MEMBERS

Chair: Aimee Greenebaum, Monterey Bay Aquarium

Vice-Chair: Kristen Pelo, Alaska SeaLife Center

Treasure: Stephanie Huettner, Omaha's Henry Doorly Zoo & Aquarium

Secretary: Kirby Pitchford

Sara Hallager, National Zoo

Cindy Pinger, Birmingham Zoo

Deb Dial, National Aquarium

Tom Schneider, Detroit Zoo

Colleen Lynch, Riverbanks Zoo

CJ McCarty, Oregon Coast Aquarium

Josef Lindholm, Tulsa Zoo

Kate Lyngle-Cowand, Tracy Aviary



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PROGRAM LEADERS

Spotted Dikkop - Alan Yester, Birmingham Zoo
African Jacana - Diane Lavsa, National Aviary
Masked Lapwing Phillip Horvey, Sedgwick County Zoo
Common Murre - Sara Perry, Seattle Aquarium
Tufted Puffin - Sara Perry, Seattle Aquarium
Horned Puffin - Sara Perry, Seattle Aquarium
Atlantic Puffin - Stephanie Huettnner, Omaha's Henry Doorly Zoo & Aquarium
Black-necked Stilt - Carmen Murach, Northeastern Wisconsin (NEW) Zoo
Inca Tern - Sunny Nelson, 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



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EAZA TAG UPDATE

The newly re-formed EAZA Charadriiformes TAG held its first meeting in May 2018 at the Budapest Mid-Year meeting. Multiple regions attended as it followed the International Joint TAG Chair meeting. The meeting included talks on possible future conservation projects, population surveying using drones and an overview of the conservation work of DOC (Department of Conservation) in New Zealand. We also launched the role of Species Investigators to examining the sustainability of some of our EAZA populations.

The last meeting to be held was in 2014, which means we have a lot of work to catch up on. We unfortunately lost Nigel Simpson, Wild Place, Bristol, UK as Vice TAG chair, but we have gained Jo Gregson, Paignton, UK as new Vice Chair. Dr Paul Rose joined the committee as Research advisor, his close work with WWT and Exeter University will be an asset to the TAG.

Charadriiformes Conservation is the TAG new facebook page

(<https://www.facebook.com/groups/526944707700179/>)

sharing posts on Charadriiformes research and both in-situ and ex-situ conservation from around the world.



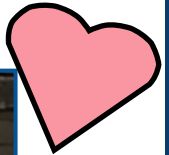
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THE SHOREBIRD PERSONALS

MASKED LAPWINGS SEEKING HOLDERS

FUN AND VISUALLY APPEALING
FANCY YELLOW DANGLING THINGS
DOES WELL WITH MULTISPECIES
INEXPENSIVE
TWO LEGS
VERY ACTIVE



PLEASE CONTACT PHIL at PHILLIP.HORVEY@SCZ.ORG

TUFTED PUFFINS, HORNED PUFFINS, COMMON MURRES, ATLANTIC PUFFINS
SEEKING HOLDERS

DIVING
FLYING
CHARISMATIC SEABIRDS
ENHANCE YOUR MARINE BIRD PROGRAM
DO MANY GREAT BIRD THINGS

PLEASE CONTACT STEPHANIE at
STEPHANIEH@OMHAZOO.COM





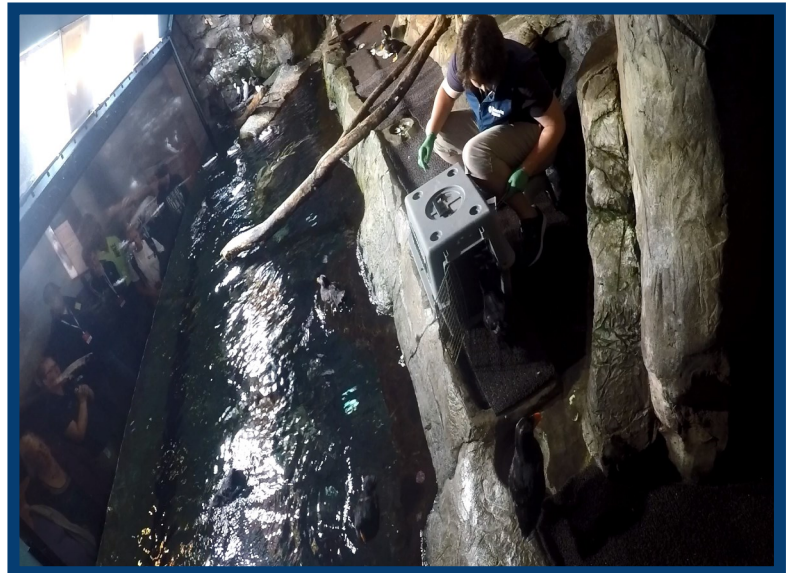
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Using Natural History to Crate Train Alcids

Susan Schmoker, Aviculturist at Monterey Bay Aquarium

Many seabirds are naturally colonial and often managed in groups within zoos and aquariums. Catching a specific individual within a flock can be challenging and stressful, whereas crate training increases efficiency and decreases the stress experienced by both birds and their keepers. Our goal was to teach our seabird colony to calmly enter a crate on cue. During the process we noticed that half of the birds weren't making much progress; the exhibit's puffins were learning quickly, while its murrens remained uncomfortable crossing the doorway's threshold. But why?



When training any animal it is important to consider both its strengths and limitations, so we first looked at the natural history of our birds to solve this problem. One key difference is that tufted puffins (*Fratercula cirrhata*) commonly nest in burrows while common murrens (*Uria aalge*) nest alongside a rocky edge, in the open. Initially we were using a cat crate for both species. It was dark, with a narrow doorway and a large step that the murrens were prone to trip over. It made sense for a puffin to take to this crate more naturally but not necessarily a murre.

We decided to design a crate that felt less like a burrow. It needed to feel open, so we used polycarbonate - a clear, durable, light weight plastic. We were able to design a wide doorway with no floor lip, and added a feeding port in the back to help us provide reinforcement. Now the birds can see all around themselves and have more room to walk through the door. It is also keeper friendly: being light weight, easy to clean, and made with minimal hardware subject to rust.



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We focused on desensitization for the first week. The crate was brought in every morning, loaded with fish, and left out while we cleaned. Once the birds were comfortable with it on its own, we put a person behind the crate who could reward birds as they came closer to entering. We did this once a day, five days a week, and saw dramatic improvement. Within three months all eight murrelets were readily getting inside. We continued to use the cat crate for puffins and can now also target the species we are training. Using the birds' natural history to our advantage, we were able to accelerate our

training, improve the confidence of our animals, and the overall welfare of our sea-bird colony.



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A Razorbill Homecoming

Aimee Milarski, Senior Aviculturist, National Aquarium

The National Aquarium's Sea Cliffs exhibit houses three species of alcids: Atlantic Puffins (*Fratercula arctica*), Black Guillemots (*Cepphus grylle*), and Razorbills (*Alca torda*). The acquisition of new individuals into the colony is typically through in-house breeding or transfers from other AZA institutions. This year, however, two special individuals were acquired; one from the coast of Massachusetts and another which originated from a Florida beach.

Wild Care of Cape Cod wildlife rehabilitation facility receives an average of 1300-1700 animals per year. In 2018, one of those animals was an injured razorbill

(*Alca torda*). Long John Silversides (as he was later named) was found by a member of the public in the town of Wellfleet, MA. Fortunately, the staff of Wild Care was able to stabilize him. Several months and several pounds of capelin later, Long John Silversides (LJS) was thriving in their care. LJS was healthy but had an eye injury, and he was deemed non-releasable.



Wild Care reached out to AZA facilities, and the National Aquarium (with the only group of razorbills in the US) partnered to bring LJS to Baltimore, Maryland. Additionally, the National Aquarium located a second single razorbill within AZA to quarantine with LJS.



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LJS and Sandy (named for the Hurricane which took her many miles off course to the coast of Florida in 2012) bonded quickly. Sandy received excellent care at a rehabilitation center and was transferred to another AZA facility before arriving at the Aquarium.

Long John Silversides was transported from Massachusetts by Wild Care staff to the Aquarium's Animal Care & Rescue Center (ACRC) in Maryland for quarantine. Once admitted to the ACRC, LJS received a thorough health exam, radiographs, blood work, and preventative treatments. Sandy arrived a week earlier, and both animals quarantined together for approximately 45-days. Once this time concluded, LJS and Sandy were moved to the main off-exhibit holding space which allowed them to interact with the other alcids. Despite rigorous care, LJS's eye continued to worsen and under the guidance of a veterinary ophthalmologist, he underwent a four hour surgery to have the it removed.

During Sandy and LJS' time in holding, the alcid colony could see and vocalize with the new razorbills. Several razorbills and a few curious puffins would make visiting the new razorbills part of their daily routine. Aviculturists were also able to work in the beginning steps of crate training.

Once post-surgery treatments were complete, aviculturists and alcids welcomed the newest members to join the colony of National Aquarium's Sea Cliffs Exhibit.

Horned Puffin Nesting at the NC Zoo

Nickie Hauch, Zookeeper, North Carolina Zoo

Sarah McCrory, Zookeeper, North Carolina Zoo

Melissa Vindigni, Zookeeper, North Carolina Zoo

The North Carolina Zoo cares for 31 horned puffins at the Rocky Coast habitat. While nesting season generally starts around the end of April, keepers start preparing much earlier.



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Furniture in the habitat changes as boxes are installed and burrows open. Our puffins have two different style nest boxes. The first, a grey PVC box, measures 12x12x12 inches. Boxes are lined with a perforated tile, for drainage, topped with nomad. The second box, made from black corrugated plastic, measures ~21x15x15 inches. Keepers designed these larger boxes to provide more room for parents and chick. Boxes have a pull out tray so substrate (tile/nomad) can be changed as needed.

Before set up, boxes are inspected to see if any modifications or repairs are needed. Since puffins are cavity nesters, burrows that lead from habitat to box are also examined and cleaned. Once boxes have passed inspection they are secured to the backs of the burrows. If needed, cameras are also installed so keepers can monitor incubation and chick rearing.

Enrichment protocols also change during nesting season. Keepers increase the amount/types of nest materials offered. Sheet moss, corn husks, pine needles, and plastic kelp are provided almost daily. Materials are placed along the rock wall and walkway to encourage natural behaviors like collecting and climbing. We also use nest materials as reinforcement to weigh puffins during nesting season as they will voluntarily step on to a scale to receive moss or kelp.





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In addition, keepers offer more enrichment designed to elicit climbing/ manipulation. The main goal is to occupy single, especially younger, puffins. These birds will often follow older, paired puffins and try to go into active burrows causing unnecessary stress and aggression from the nesting pair. The overall goal during the summer is to keep everyone occupied and performing natural, non-aggressive behavior.

In 2017 keepers attempted to replicate the natural behavior of digging out burrows. To do this, several burrow entrances were partially blocked with nomad strips (1x10 inches) and plastic kelp. Keepers selected pairs that would reliably take nest materials in and out of burrows. As pairs mate for life and generally keep the same nest cavity, we were confident in our pair selection. Males approach burrows first and ours quickly figured out how to "dig out" their burrows making this a success. Not only did it replicate a natural behavior, it occupied the males so they were less likely to go investigate other tunnels and cause unnecessary aggression with other pairs.

Eggs that are laid in June typically hatch in July or early August. Keepers monitor pairs and watch for them to trade places in the boxes (indicating an egg has been laid) and bringing fish into burrows to feed a chick.

Burrows are typically closed mid to late October, or earlier if chicks are being introduced to the habitat. After that, nest boxes are taken down, cleaned, and stored until the next breeding season.



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Hands-on Conservation of Western Snowy Plovers

Rachel Ritchason, Curator of Birds & Records, Santa Barbara Zoo

Aimee Greenebaum, Curator of Aviculture, Monterey Bay Aquarium

CJ McCarty Curator of Birds, Oregon Coast Aquarium

*Gabriela Iburguchi, Ph. D. Conservation Program Manager, San Diego Zoo
Institute for Conservation Research*

Several AZA-accredited organizations and partners are involved in an intensive, hands-on effort to help save the threatened Western snowy plover. Federally listed since 1993, this tiny shorebird nests along the West Coast in the narrow band of land between sand dunes and the high tide line, where it is vulnerable to disruption by human activities.

Since 2000, more than 165 birds have been released back into their coastal habitat thanks to the efforts of the Santa Barbara Zoo, Monterey Bay Aquarium, Oregon Coast Aquarium, SeaWorld San Diego (in collaboration with San Diego Zoo Global and Naval Base Coronado), with field partners including federal, state and local agencies, as well as other rehabilitation centers and non-profit organizations.



More than 24,500 acres of beaches are designated as critical habitat as part of the U.S. Fish and Wildlife Service Western Snowy Plover Recovery Plan, which also includes public-use restrictions in nesting areas, population and nest monitoring, predator management, and outreach.

The collection of eggs, chicks or injured adults for intervening care is also called for in the Plan, which is where the hands-on part comes in.

Collected eggs come from abandoned nests (perhaps the parent was depredated),



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...nests that were flooded, eggs that were laid in precarious places such as an air-field, or chicks observed with no parent for a period of time. Each Recovery Unit decides when and how to collect eggs or chicks from the wild in their region, and each field partner has different criteria for intervening.

When a snowy plover egg or chick arrives at one of the facilities, it is first stabilized and the patient's development and progress is checked. A newly laid egg goes into an incubator, while hatching eggs or chicks are put in an Avian Intensive Care Unit.



Once hatched, the precocial birds start to walk and look for food within a few hours. They are introduced to invertebrate prey, which includes small crickets, mealworms and fly larvae.

The chicks are taught to forage by using various sized enclosures, starting in a small, warm space where food is introduced where they can easily find it. Over time, the size of the holding enclosure is increased, food is made more difficult to find, and heat is gradually reduced until the chicks are old enough to thermoregulate by themselves.

Whenever possible, the final stage of captive rearing shifts to a large outdoor enclosure so fledglings can develop strong muscles to prepare for flight and eventual release back into the wild. Releases take place on the best beach habitat available where other plovers may be seen (but not too close, to reduce potential issues with territorial resident birds).





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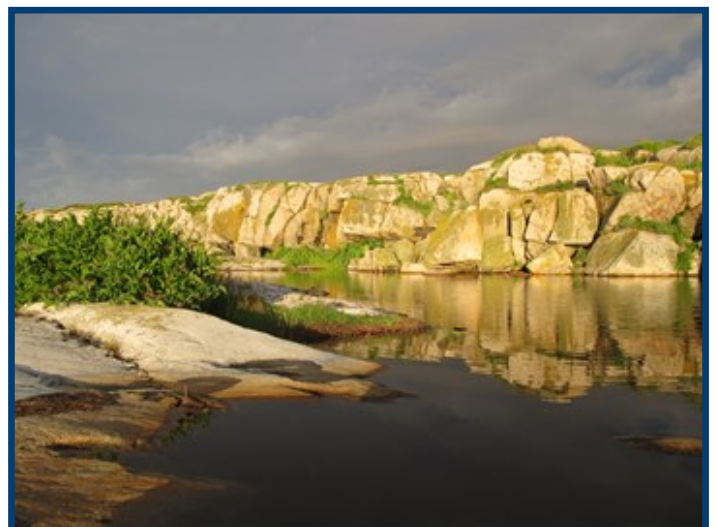
Most of these intensive efforts are done behind the scenes and require extensive hands-on work. But the rewards are worth it. The AZA teams build long-lasting relationships with partners at government agencies and local rehabilitation centers and make invaluable contributions to recovery of the species, through the successful release of young plovers to fly free in the wild, where they become part of the adult breeding population. And, for each individual bird, our efforts make all the difference.

Seal Island

Tammy Walling, Senior Aviculturist, National Aquarium

Project Puffin began in 1973 with the goal of restoring populations of Atlantic Puffins (*Fratercula arctica*) to Maine. In 1984, restoration began on Seal Island with the translocation of nearly 1,000 Puffin chicks from Newfoundland. By 1992, adults were returning to the island to nest. Today, the island is home to breeding populations of several Charadriiformes, including Common Tern (*Sterna hirundo*) and Arctic Terns (*Sterna paradisaea*), Atlantic Puffins, Black Guillemots (*Cephus grille*), and Razorbills (*Alca torda*). It is also very important habitat for migrating passerines, seabirds, and waterfowl.

The National Aquarium sponsored me to volunteer on Seal Island for two weeks in 2017. The island is rustic with only two buildings, a small kitchen/office, and an outhouse. Staff and volunteers slept in individual tents.





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This was one reason I chose Seal Island, as I love tent camping!! It was quite a journey to get to the island and to get food and supplies from Hog Island Audubon Camp in Bremen. We drove to Rockland, took a ferry to Vinalhaven and a lobster boat to the Island, and finally, a dinghy took us close to the beach.

Each day began with a weather and sea temperature check, as well as taking a morning census of bird species. The rest of the day was spent on research. I really enjoyed chick productivity and growth studies. This sometimes involved climbing over rocks, as all of the Alcids on the island nest in burrows or in crevices under rocks. We would then get chicks from the burrows to measure and weigh them. This was fondly called "grubbing" by the island team, as we often were in really awkward positions to reach chicks. The puffins in particular tended to be very deep under rocks. Tern chicks were much easier to get to, as adults nest on the ground. However, we then had to contend with the tern flock (or the "Seal Island Luftwaffe" as called them) dive bombing en masse. Padded hats were very helpful in the tern colonies.

Additionally, we would do provisioning studies, which was basically sitting in a blind and monitoring adults feeding chicks. Puffins were a challenge, as they bring fish back by the "bill-full". The easiest method was to take photos and analyze them later at camp.



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The terns were really fast, so I learned to ID fish on the fly, literally! We also did band sighting and resighting. It was especially rewarding to see bands of individuals which had not been seen before, or in several seasons. We also did daily counts of other birds on the island. Some really cool species included Ravens (*Corvus corax*), Common Murres (*Uria aalge*), and even a Red-billed Tropicbird (*Phaethon aethereus*) .

The day ended with another weather check, and the bonus of a Leach's Storm-Petrel vocalizing from its nest under my tent platform!

This was an amazing experience. I am so grateful for the opportunity to do field-work with such awesome birds and dedicated people.

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