Swan goose, Photo Credit: Marija Elden

THE DUCK POND

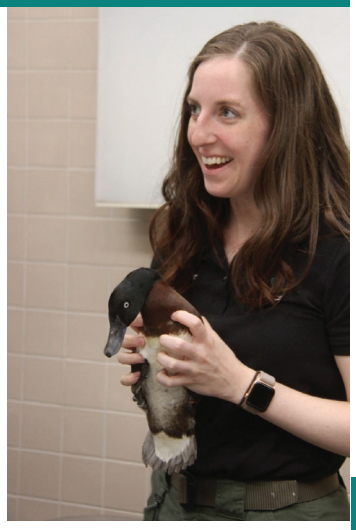
Association of Zoos and Aquariums Anseriformes Taxon Advisory Group
Summer 2022 · Volume 1, Issue 3

WATERFOWL
Taxon Advisory Group

ASSOCIATION OF ZOOS & AQUARIUMS

AROUND THE POND

Allison Bailey
Central Park Zoo



Greetings from the Central Park Zoo (CPZ)! I am a relative newcomer to the world of waterfowl but working with them for the past five years has been a formative experience for my career. My background is in reproductive biology, which I have always intended to apply to supporting species of conservation concern. I received my PhD in Evolution, Ecology, and Behavior in 2016, during which I studied how environmental conditions influence reproductive physiology and behavior in Siberian hamsters. After I graduated, I was lucky enough to land an aviculture internship at the CPZ. I did not have any practical experience working with birds before, but I instantly fell in love with the waterfowl collection; I was equally captivated by their colorful physical beauty as by their even more colorful personalities. I had the opportunity in that internship to not only work closely with dozens of waterfowl species, but also to start contributing to furthering the success of waterfowl propagation at CPZ by organizing its extensive waterfowl breeding data archives.

Currently I am working at CPZ as a curatorial science fellow where I have a broader focus than solely on waterfowl, but they were my original love of my zoo career, and I will always have a special fondness for them. I have continued to support our waterfowl programs by analyzing data, creating decision-making tools, and conducting studies to refine artificial incubation techniques. This past year, I'm also thrilled to have become more involved with the Anseriformes TAG as the new Monitored Program leader for the white-headed duck. I look forward to continuing to work with waterfowl and those who care for them for a long time to come.

INSIDE THIS ISSUE

Madagascar teal
Photo Credit: Craig Mikel

MADAGASCAR TEAL

Anas bernieri

Range: Low altitude western coastline of Madagascar

Program Status: Yellow SSP

Program Leader: Craig Mikel
Allan.Mikel@louisvilleky.gov

TAG Appeal: Endangered species with a decreasing population of 1,000-1,700 mature individuals. There are strong ties to Durrell Wildlife Trust and ongoing in-situ conservation efforts associated with the Madagascar teal and other waterfowl endemic to Madagascar.

SPECIES PROFILE: MADAGASCAR TEAL

The Madagascar teal, a little dabbling duck with bold attitude. One of only three waterfowl species endemic to Madagascar, the Madagascar teal is the smallest at an average weight of 400 grams. With the bright pink bill and legs and stunning wing bands, this duck is more than drab. Due to catastrophic habitat destruction throughout Madagascar, this little teal is classified as endangered, with only fragmented habitats along the western coast of Madagascar remaining. This species was first described in 1932, and rediscovered in 1969, with rare sightings and low numbers throughout the fragmented coastline. With Madagascar seasons being defined with a wet and dry season, these teals breed during the annual flooding of the mangrove forest from November-March.

First collected from the wild in 1993 for conservation purposes, the first documented reproduction in human care occurred in 1998 at Durrell Wildlife Trust. The entire ex-situ population is founded by seven males and two females (three of the males are siblings). Durrell Wildlife Trust manages the ex-situ population under the guidance of the Malagasy government who retain ownership of all Madagascar teals. The Madagascar teal is a species that can breed either by artificially mimicing seasons (indoor or outdoor) or by housing them indoors in a tropical aviary year-round. Breeding appears to be stimulated by environmental changes rather than seasonality such as rain fall or dry periods. For such a small seemingly tropical species, thinking outside the box has been the best strategy to managing these little guys in mixed species aviaries. The Madagascar teal has mixed well with much larger species of waterfowl as well as ibis, storks, tortoises, small mammals and many other species. Madagascar teals are relatively new to aviculture and determining the best management practices has been the focus of the SSP for many years. Madagascar teal have been housed outdoors with temperatures below 32 degrees (as low as 15 degrees documented) with acclimation, open water, and some wind breaks. As cavity nesters, one can expect them to feel equally comfortable roosting high off the ground as well as actively dabbling throughout pools and water features.

Madagascar teal
Photo Credit: Durrell Wildlife Conservation Trust

QUESTION AND *ANSER* – WATERFOWL TRIVIA

Which waterfowl species has skin which can be toxic to humans, the result of the bird feeding on poisonous blister beetles?

Answer on Page 8

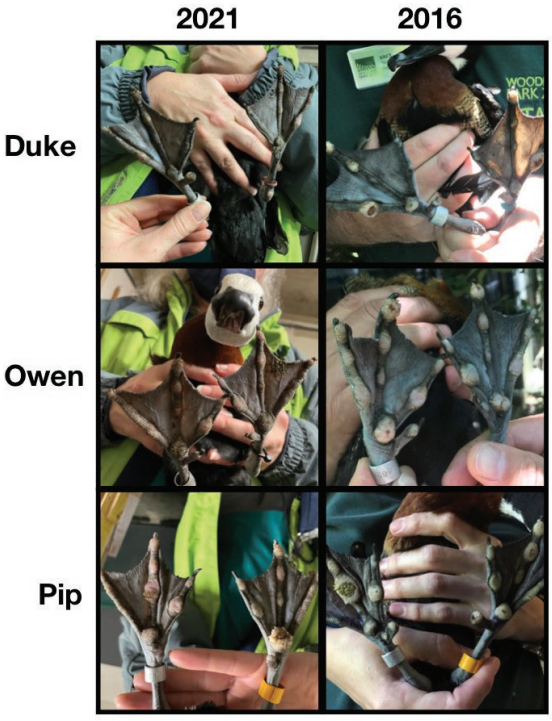
MANAGING PODODERMATITIS AND ARTHRITIS IN 3.0 WHITE-FACED WHISTLING DUCKS

Tamlyn Sapp
Woodland Park Zoo

At Woodland Park Zoo (WPZ) in Seattle, Washington, we have 3.0 white-faced whistling ducks (*Dendrocygna viduata*) with severe pododermatitis and arthritis. These ducks have exhibited these conditions since their arrival to WPZ in 2014. Over the past year, some veterinary and husbandry changes were made to increase their quality of life. After rotating through multiple exhibits with a variety of substrates over the past few years, these three ducks now reside in our Chilean flamingo exhibit on mason sand.

All three ducks have arthritis in both stifles. One of our ducks, "Duke," started a laser therapy regimen in October 2020, targeting bilateral foot plantar surfaces and hocks, with the goal of increasing comfort and range of motion. Because we were seeing some improvement in Duke's mobility and overall behavior, we decided in July 2021 that our other two ducks, "Owen" and "Pip," would benefit from their own laser therapy regimens. At their weekly appointments, our veterinary technician uses a deep probe (810nm-500mw) to target the synsacrum, stifles, hocks, and foot plantar surfaces of concern for each bird, set at 25HZ/30sec for all areas.

Along with laser therapy, these ducks receive daily supplements, which they readily eat on white proso millet, offered in individual cups by keepers. They are currently prescribed SID Glucosamine/Chondroitin, Antinol, and Meloxicam, along with



Comparison of bumble lesions on white-faced whistling ducks, now vs then.
Photo Credit: Tamlyn Sapp

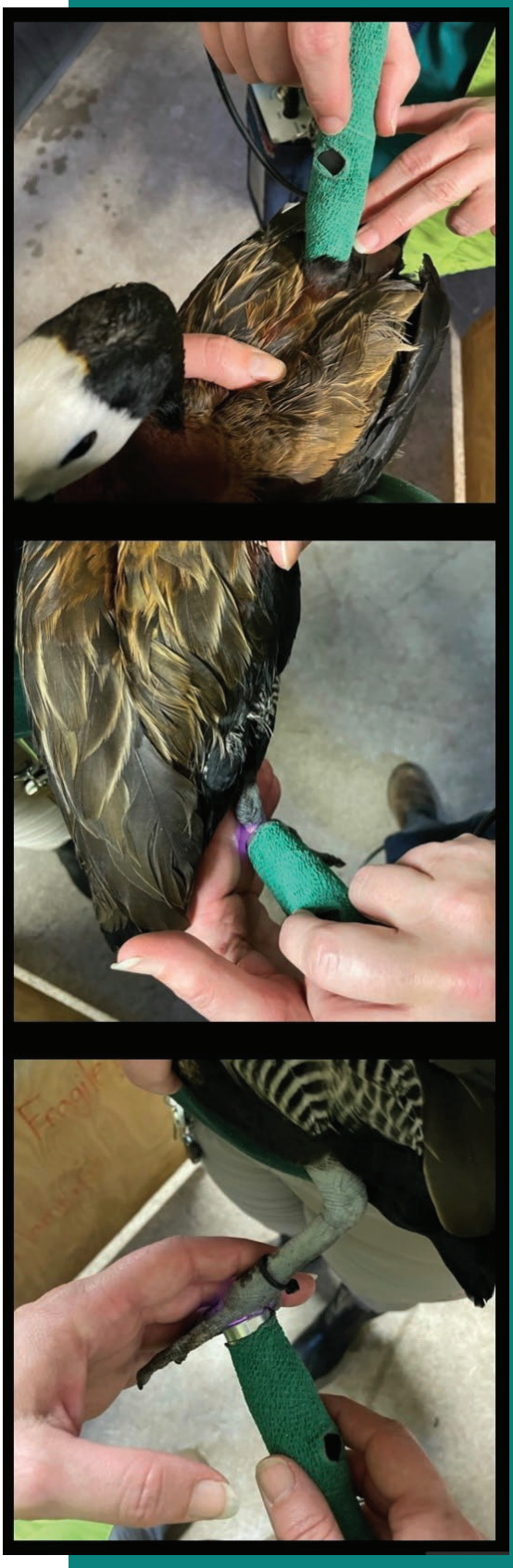
once-a-month Adequan subcutaneous injections. These treatments are meant to help keep their joints lubricated and aid in range of motion. It is difficult to tell whether the oral treatments or laser therapy treatments have the most impact on their mobility, but we are seeing improvement with their overall activity level, which we track with a ZIMS Care and Welfare module. Keepers are encouraged by regularly observing them swimming and utilizing the entire exhibit space, throughout all seasons.

In conjunction with our veterinary care, the use of mason sand as the substrate in the Chilean flamingo exhibit might be the most impactful husbandry change we have made. Although commonly known for its use in sand boxes and as a paver base, the fine, uniform granules of this substrate appear to work miracles on bird feet! Since introducing mason sand as an exhibit substrate, we have had minimal pododermatitis issues with our entire flamingo flock, and the bumble lesions of all three ducks have vastly improved.

In order for our veterinary and husbandry changes to be successful, a training plan was created for Duke, Owen, and Pip to encourage exercise in the exhibit and participation in laser therapy. It was also important to find a way for them to eat their diet without competition from wild mallards, and to make sure we could meet their husbandry needs without increasing any stress on the flamingo flock. The first step was to desensitize the ducks to eat millet out of a cup held by a keeper, to ensure they received their medication, but also to eliminate daily handling and potential oral irritation from a syringe. Fortunately, it did not take long for them to be comfortable with this administration method, and overall, they are very compliant. The next step was to increase their comfort level of being enclosed in the flamingo barn, the space we wanted to use for laser therapy appointments. It took a couple of weeks to solidify a routine, but they learned that when they walked to the barn in the morning and afternoon they could eat without competition in a safe and quiet place. It was also pertinent to crate train all three ducks, which has proven to be a relatively reliable method of transport, especially since we wanted to avoid bringing any nets on exhibit and/or chase the ducks around the flamingos, for fear of causing unnecessary injury.

Our goal this year was to improve the condition of the feet and joints of these three ducks to increase their quality of life. By implementing veterinary techniques and behavioral husbandry practices, we have made substantial steps forward in this goal. We will continue to investigate new and best practices and modify our training plans as we adapt to the ever-changing needs of Duke, Owen, and Pip. For more information you can email Tamlyn.Sapp@zoo.org.

Owen, Pip, and Duke crate training.
Photo credit: Tamlyn Sapp



Top: Targeting synsacrum.
Middle: Targeting hocks.
Bottom: Targeting foot plantar surfaces.
Photo credit: Tamlyn Sapp

UPDATES ON SSPs:
Reimagining Population Management in AZA

The AZA Species Survival Plan® (SSP) Program has become a symbol of AZA's collective commitment to the species that we manage. Over the past few decades, despite our best intentions, we have built a system in which we are trying to manage too many species given our limited resources. Additionally, we are not managing some of them as effectively as we could. Our ability to successfully maintain sustainable populations depends on our cooperation. As it is, many AZA Animal Program populations are not sustainable, and those animals will no longer exist in zoos and aquariums if we don't change our approach.

To combat this very real crisis, the AZA Board of Directors directed the Animal Population Management (APM) Committee to develop a new framework for managing Animal Programs, using three guiding principles:

1. Animals are derived from biologically sound populations.
2. Zoos and aquariums drive SSP species selection. SSPs will be driven by facility interest and commitment rather than what TAGs want to manage.
3. Accountability by both the member facilities and the Animal Program will be built into the framework.

This "reimagining" of our population management framework is still in development, but close to being finalized. The draft includes four objective criteria to determine if a program is eligible to be an SSP:

- Majority (>50% of individuals) of the managed population is housed in AZA member facilities (if it's an AZA Animal Program, most of the animals should be in AZA facilities)
- At least 15 AZA facilities house the species (there should be some minimum number of AZA facilities housing the species)
- The program is not externally managed; this includes any cooperatively managed program where final approval of breeding, transfers, husbandry or reintroductions of animals managed in AZA facilities falls to or is made in partnership with an external entity (non-AZA entities should not be able to have significant impacts on an AZA Animal Program)
- More animals are acquired through breeding than from non-AZA sources (an AZA Animal Program shouldn't be dependent on acquiring animals from outside of AZA)

It's the intention that these new criteria will be used by all TAGs to assess their programs during the Regional Collection Planning (RCP) process, which will make species selection more standardized. The APM Committee does recognize that one size will not fit all, so exceptions may be made in certain cases.

If a program meets the four criteria, an initial assessment will be conducted. The Committee has also proposed 3 types of SSP Programs depending upon the outcomes of the assessment:

1. Secure SSPs: these are species that will still be present in zoos and aquariums in 100 years in a robust, viable, healthy, biologically sound population.

2. Signature SSPs: these species meet the 7 criteria and are on track for long-term sustainability.

3. Provisional SSPs: these species do not currently meet the 7 criteria, but they have the potential to do so within a reasonable timeframe.

African pygmy goose
Photo Credit: Pinola Conservancy

Programs that do not meet the criteria nor fit into one of the three proposed SSP categories can continue to be managed and supported by holding facilities. A consortium model, in which one or a few facilities act as a breeding hub(s) for a species, is a potential way to collaboratively manage a population outside the SSP Program. This type of management strategy has already been successful for some species and allows for facilities to work with species that might not fit well in the SSP model. Although not be branded as SSPs, these programs will have more flexibility in how they can be managed.

We are still only 6-12 months away from implementation of these proposed changes, pending approval by the AZA Board of Directors.

We need all of the AZA community to remain engaged and involved.

Please don't hesitate to reach out to:

Joe Barkowski, APM Committee Chair
jcbski@aol.com

Hollie Colahan, APM Committee Vice Chair
hcolahan@birminghamzoo.com

Michael Ogle, APM Committee Liaison to Anseriformes TAG
mogle@zooknoxville.org

or the AZA Conservation, Management, and Welfare Sciences staff
animalprograms@aza.org

Please be a part of helping to find the best solution – we'll be successful if we work together, communicate, and stay open to new approaches!

Scaly-sided merganser
Photo Credit: Paige Moore

BEGINNING A SPECTACLED EIDER AMBASSADOR ANIMAL PROGRAM

Kristen Pelo, Avian Curator
Alaska SeaLife Center

The Alaska SeaLife Center (ASLC) is the only AZA accredited institution in Alaska. It is uniquely positioned to be an educational gateway, both scientifically and scholastically, to the Arctic species living in our Alaskan backyard. The ASLC is also a research institution, focusing on marine Arctic species. While research has varied over the years to include both in situ and ex situ research with various animals, a strong focus has been on sea ducks, particularly Steller's (Polysticta stelleri) and spectacled eiders (Somateria fischeri). These birds spend most of their year in marine waters, coming onshore only to breed.

Steller's and spectacled eiders are the only waterfowl species native to North America which are listed as threatened by the federal government. We have worked closely with the USFWS recovery teams for these species for many years investigating critical research needs and release program potential. Recovery priorities have changed over the past few years, resulting in a shift towards more education and outreach programming. Consequently, we decided to put our efforts towards training an ambassador animal to enhance our ability to do public outreach with a focus on empathy towards these gregarious waterfowl.

Spectacled eiders, in particular, are a very large and colorful species, giving them an eye-catching appearance. Their disposition is friendly and curious, making them an excellent candidate for an ambassador animal species. They also have a compelling conservation story related to how climate change is affecting animals and ecosystems in the Arctic.
Our staff involved with our eider program is composed of a number of new keepers with little animal experience. Thanks to the generosity of the Anseriformes TAG, we were able to participate in an online weekly workshop from Natural Encounters, Inc. based around animal training. This training was immensely helpful in teaching our team about animal training, welfare, and educational program development based around ambassador animals.

In the summer of 2021, we were able to hatch and successfully rear five spectacled eider ducklings. From past experience raising spectacled eiders, we assumed they would imprint easily. Our goal was not to imprint them fully, but rather make them as comfortable as possible with keepers and animal training, while allowing them the opportunity to behave naturally with other eiders in their cohort. Consequently, we used a partially hands-on approach. We handled them two to three times a day but tried not to coddle them or over interact with them.
We began their training with stationing on a scale for daily weights and worked on desensitizing them to kennels and handling. They desensitized to these things well, and easily stationed for us. As we transitioned to bigger training steps, a unique challenge presented itself, namely, what to use for reinforcement.

Spectacled eiders
Photo Credit: Alaska SeaLife Center

In the past we have used favored toy items or treat items as reinforcement. When the animal does a desired behavior, they get access to the favored toy item for a predetermined time or get a small amount of a favored diet item. However, this group did not respond to these stimuli like any birds we have raised before. Even when offered treats like fish and bloodworms in their enclosure, they did not want to eat them. They would interact with enrichment items our other waterfowl get excited by, but not when we were present.

We have hand raised many eiders over the years, and every so often we'll get a group that behaviorally is just very different. We weren't adding much more handling or interaction than we have done for research projects in the past. We also were following the standard protocol we've developed for hand raising waterfowl over the years. But still, they were quite different. The only reinforcement we found that worked was vocal reinforcement. When we would talk and the birds would obviously perk up and respond positively.

Since this vocal reinforcement could have a large impact on them fully imprinting, we decided to shy away from using it. We attempted instead to concentrate on finding a reinforcement that would not also encourage imprinting. Unfortunately, this proved incredibly more difficult than anticipated.

As we were searching for this reinforcement, we also were facing some other departmental staffing challenges which prevented us from being able to fully focus on the training program for about a 2-month period. This period coincided with the fledgling period, which in retrospect should have been when we were concentrating on maintaining the training relationship with them. It has unfortunately been difficult to reestablish the previous trained behaviors.

While this was an amazing learning experience for myself and my staff, we did not end up with the trained ambassador animals we had hoped for. We have learned so much from this experience and plan to try again this summer and correct the shortcomings we had on our part.

We do, however, have some very tame eiders and we have plans to develop programming that would include the opportunity to get up close and personal with them. They are still incredibly curious and gregarious. No one can enter the pen without getting dabbled by a spectacled eider. While we may not have gotten exactly what we want yet, I think we'll get there soon!

ANSERIFORMES TAG MISSION STATEMENT

The mission of the AZA Anseriformes Taxon Advisory Group (TAG) is to provide leadership in the captive management of ducks, geese, swans, and screamers in North America. The TAG is committed to maintaining sustainable captive populations, improving the welfare of waterfowl within AZA, and raising awareness for conservation of waterfowl worldwide.

WATERFOWL
Taxon Advisory Group

FUNDING OPPORTUNITIES AVAILABLE!

ANSERIFORMES TAG GRANTS

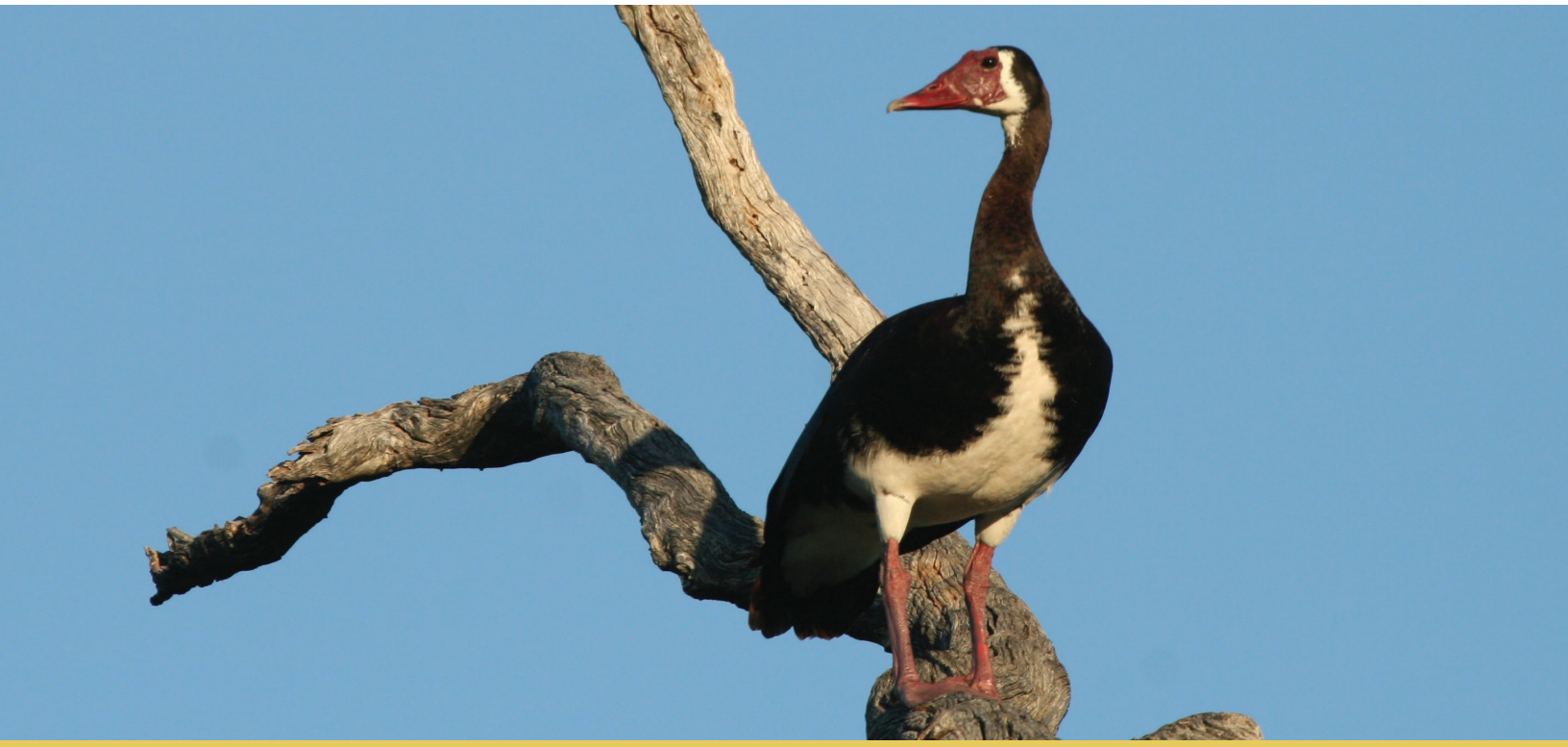
Would you like to expand your knowledge of waterfowl care and husbandry? Do you have a vision for how to make a difference towards the conservation of ducks, geese, swans, or screamers in the wild? Do you wish you could do more for waterfowl, but don't know where to begin?

Here is your chance!

The AZA Anseriformes TAG is pleased to be offering not one, but two grants in the amount of up to $500 US each. One grant is designated for Conservation and Research, the other one is for Professional Development.

For application materials, or to request more information, please contact TAG Steering Committee members Joanna Klass (Joanna.Klass@Zoo.org) and/or Ian Shelley (ian.shelley@marylandzoo.org).

Applications are accepted on a rolling annual basis.



Spur-winged goose, Photo Credit: Keith Lovett

Trivia *Anser*: Spur-winged goose