**AZA 2015 MID-YEAR MEETING** March 21-27, 2015 • Columbia, SC

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**AVIAN SCIENTIFIC ADVISORY GROUP/AVIAN TAG AGENDA**

**Sunday, March 22-Thursday, March 26**

**Sunday, March 22nd**

***Richland AB***

8:00 am - 9:00 am

* **Anseriformes TAG**

9:00 am - 10:00 am

* **Piciformes TAG**

10:00 am - 11:00 am

* **PACCT TAG**

11:00 am - 11:30 am

* **Charadriiformes TAG** (Spires Board Room)

11:00 am - 12:00 pm

* **Azure-winged Magpie SSP**

1:00 pm - 3:00 pm

* **Ratite Animal Care Manual Working Session**
* **Coraciiformes TAG Steering Committee** (Richland C)

3:00 pm - 5:30 pm

**Breeding Toucans in Captivity Workshop**

* 3:00-3:15: **Introduction** - Lauren Schneider, SeaWorld San Antonio
* 3:15-3:35: **Breeding Ramphastids at the Denver Zoo** - John Azua, Denver Zoo
* 3:35-3:55: **Keel-billed Toucan Breeding** - Jennifer Wesson, Fresno Chaffee Zoo
* 3:55-4:15: **Breeding Behavior in the Chestnut-mandibled Toucan** - Jerry Jennings, Emerald Forest Birds
* 4:15-4:35: **Toco Toucan Breeding** - Melissa Reynolds, Riverbanks Zoo and Garden
* 4:35-4:55: **Ramphastid Nutrition** - Deb Schmidt, Saint Louis Zoo
* 4:55-5:30: **Hand-rearing Toucans** - Carolina Arruda, Dallas World Aquarium
* 5:15-6:00: **Discussion Identifying Areas of Investigation** - Michael Macek, Saint Louis Zoo

**Monday, March 23rd**

***Richland AB***

8:00 am - 1:00 pm

**Penguin Workshop**

* 8:00 - 8:20: **Introduction/TAG updates** - Tom Schneider, Detroit Zoo

*A review of the Penguin TAG’s 2014 achievements including publishing the Animal Care Manual, completion of Population Viability Analysis for all program species, and submitting the Regional Collection Plan. There will be a discussion of the TAG’s goals for the next five years.*

* 8:20 - 8:50: **Penguins as Marine Sentinels: Building Science Partnerships** - Dee Boersma, University of Washington, Global Penguin Society, Penguin Sentinels

*Penguins are ocean sentinels. Long-term data can reveal what they are telling us about marine and coastal ecosystem health and how to balance the needs of penguins and people. Over half of penguin species are on the International Union for the Conservation of Nature (IUCN) Red List of Threatened Species. The Global Penguin Society (GPS) is focusing attention on the plight of the penguins and is helping to support an IUCN penguin specialist group. Conservation in the wild is the best long-term solution. Success will depend on partnerships and must be built on science. Understanding the problems that wildlife face is the first step toward creative solutions. Research on oiled penguins in Argentina in the 1980s fueled public action to move tanker lanes farther offshore (1994) and curb illegal bilge dumping. Annual censuses of the Magellanic penguin breeding population at Punta Tombo show a decline of over 20% in 30 years. Reproductive success is highly variable and years of lowest reproductive success had 60 mm of rainfall between October to December, when penguins had eggs and chicks. Climate change is already impacting the population, as egg-laying dates at Punta Tombo are later, by about 3 days per decade, than the early 1980s. Research shows food for young chicks is a problem, yet no Marine Protective Reserve at Punta Tombo is in place. Solutions for all penguins are not the same. For Galapagos penguins, building the population by providing shady, high-quality nests may be the most effective solution. For Yellow-eyed penguins disease control may be most critical and for African penguin closing fisheries around breeding sites may be required. Penguins in zoos and aquariums are ambassadors to help penguins in the wild. We should use their full potential to help penguins in the wild.*

* 8:50 - 9:20: **African Penguins: A Pilot Species for AZA's New SAFE Program** - Steve Sarro, Smithsonian’s National Zoo and Gayle Sirpenski, Mystic Aquarium

*The wild population of African penguins today is a mere 2.5 % of what it was just 80 years ago. In November 2014 members of AZA’s SAFE (Saving Animals From Extinction) team and the co-coordinators of the African penguin SSP traveled to South Africa to participate in a stakeholders meeting in Cape Town to discuss the conservation action plans outlined in the African Penguin Biodiversity Management Plan (BMP). The goal was to come away with a list of conservation actions that the SAFE program can effectively support to help reverse the decline in the wild population. This presentation will provide an overview of the AZA’s SAFE program, outline some of the potential conservation actions and discuss the threats and changing environmental conditions facing African penguins in the wild. This presentation will include a SANCCOB update.*

* 9:20 - 9:40: **Final Population Viability Analysis Results for the Penguin TAG** - Lisa Faust, Population Management Center

*In 2014, population biologists at Lincoln Park Zoo completed Population Viability Assessments (PVAs) for all AZA penguin populations. PVAs explore the long-term health and sustainability of these populations using a computer model that takes population demographics and genetics into account, as well as the management strategies of zoo populations. Key PVA results will be presented for Penguin TAG SSPs, which point to needed management actions to assure long-term viability.*

* 9:40 - 10:00: **Reproduction 101 - Basic Overview of Egg Incubation and Chick Rearing** - Lauren DuBois, SeaWorld San Diego

*This presentation will be a general overview of Penguin egg incubation and hand rearing techniques. The focus will be on the basic needs required for successful chick hatching and rearing to include proper egg incubation, hatching parameters, nursery set up, diet requirements and proper monitoring of chicks through hand rearing.*

* 10:00-10:15: Break
* 10:15 - 10:35: **Creative Nesting: Maximizing Your Exhibit Space** - Sharon Jarvis, SeaWorld Orlando

*A collaborative look at rookery and nesting areas will discuss simple and complex enhancements that can create "more" useable breeding space. The presentation will include a wide variety of temporary and permanent changes that can be made to exhibits for both temperate and sub Antarctic/Antarctic penguin species. Additional topics will include a multi-institutional representation of nesting materials, substrates, "burrows," and rookery designs.*

* 10:35 - 10:55: **AARP(enguins)** - Tricia McDeed, SeaWorld Orlando

*Geriatric penguins in a zoological setting are becoming increasingly prevalent across AZA institutions. This longevity speaks to the husbandry expertise demonstrated by zoo professionals but at the same time creates new challenges and often the need for husbandry modifications to address the changing social, environmental and medical needs of elderly birds. While euthanasia plays a small part in what we do, the responsibility is immense and the decision to euthanize must be reached humanely and respectfully. Many institutions have implemented a Risk Assessment Tool to aid them in this process.*

* 10:55 - 11:15 - Cataracts in crested penguins: prevalence, risk/protective factors, and the impact of surgical treatment on penguin welfare - Sarah Woodhouse and Stephanie Allard, Detroit Zoo

*Eye examinations were performed on crested penguins at 8 AZA-accredited institutions. Cataracts were identified in 46.5% of Macaroni penguins and 45.5% of Rockhopper penguins. Husbandry information provided by each institution, as well as light intensity and ultraviolet light measurements collected in each penguin exhibit were examined statistically. This analysis suggested several risk factors and protective factors for cataracts in crested penguins. Although this information is useful in terms of prevention, it does not address penguins already affected by cataracts, and treatment options need to be explored. Surgical removal of cataracts was performed for five penguins at the Detroit Zoo. We assessed the impact of the surgery on the welfare of the individual penguins with a pre- and post-surgery behavioral study. We will report on observed changes in penguin behavior and the implications of this type of surgical intervention on welfare.*

* 11:15 - 11:35: **The Saint Louis Zoo’s Penguin and Puffin Coast; Celebrating Twelve Years as North America’s First Walk-through Sub-Antarctic Penguin Habitat** - Mike Macek, Saint Louis Zoo

*This presentation will investigate the variables that had to be considered, the information gaps that existed and had to be overcome, and the lessons that were learned in the conceptualization, development and management of the Saint Louis Zoo’s Penguin and Puffin Coast.*

* 11:35 - 11:50: **Do You Waddle Play? A Collaborative Discussion of Penguin Enrichment Purposes, Compositions and Complications** - Michelle Hartman, SeaWorld Orlando

*Zoos and aquariums have a variety of reasons for including enrichment in their habitats. Many use it strictly for the wellbeing of the animals. Some institutions elicit stronger natural behaviors not otherwise seen in a captive environment or to intensify the guest experience. Penguin enrichment items used by over 25 AZA accredited institutions are listed and/or described. Photos and videos of many of the items are included. Issues certain enrichment ideas have caused with the birds themselves or with guest perception are discussed. We can all increase our penguin, keeper and guest experiences by sharing our enrichment concepts.*

* 11:50 – 12:00: **Using Enrichment to Create an Interactive African Penguin Encounter** - Stacy Johnson, Denver Zoo

*One of Denver Zoo’s African penguins trained for Denver Zoo’s Animal Adventures, became ill during the training process, therefore ceasing all activities to facilitate her recovery. Once recovered and guest encounters resumed, she began demonstrating undesirable behaviors towards our guests. Various enrichment techniques were used to desensitize and redirect Juniper’s energy to successfully reintegrate her with staff and guests for these Encounters. These enrichment tools have become an integral part of the Bird Department’s training procedures for new encounter birds.*

* 12:00-1:00: Lunch
* 12:20-12:50: **Open Lunch Discussion - Improving Sustainability Across Different Penguin Species**

1:00 pm - 5:30 pm

**Reproductive Management and New Technology Workshop**

* 1:30-1:35: **Introduction** - Sara Hallager, Smithsonian National Zoological Park
* 1:35-1:50: **The Role of Infertility in Reproductive Failure** - Cheryl Asa, Saint Louis Zoo, AZA Wildlife Contraception Center

*Failure of recommended pairs to breed is all-too-common in AZA-managed populations. Past efforts to address these failures have included evaluating factors such as husbandry, housing, photoperiod, compatibility, and diet. However, a full assessment of fertility is seldom undertaken. Even if everything else is right, infertile animals won’t be able to reproduce. Development and application of fertility assessment methods can help increase reproductive success.*

* 1:50-2:10: **ABC’s of the Birds and the Bees** - Jennifer Evans, Tracy Aviary

*Science and technology can change the way we look at reproduction and reproductive problems, but birds have been breeding without any help from us for eons and in captivity for thousands of years. Sometimes going back to basics is all you need to solve the most frustrating of reproductive problems.*

* 2:10-2:30: **Practical Application of Reproductive Technology to Enhance Avian Reproduction in Captivity** - Linda M Penfold, South-East Zoo Alliance for Reproduction

*Conservation & Certain types of reproductive technology such as egg sexing and artificial insemination are well established in birds, yet probably are still underutilized in non-domestic populations under managed care. More recently, fecal hormone analysis has started to be incorporated into breeding plans to better understand why some individuals reproduce better than others, and to provide a means of measuring management changes and how they might improve chances of reproduction. Together with clear, focused breeding plans that are regularly reviewed to assess success; reproductive technology provides a strong tool for forward thinking animal managers.*

* 2:30-2:50: **Artificial Insemination in Magellanic Penguins** - Lauren Dubois, SeaWorld San Diego

*This presentation will review the management techniques and husbandry requirements to support artificial insemination in Magellanic penguins. The focus of this talk will include conditioning males for semen collection, nest set up, egg incubation and chick management.*

* 3:00-3:30: Break
* 3:30-3:50: **Gonadal Hormones and Courtship Behaviors are Indicators of Reproductive Performance in Female Whooping Cranes** - Nucharin Songsasen, Center for Species Survival, Smithsonian Conservation Biology Institute

*Gonadal hormones and courtship behaviors are indicators of reproductive performance in female whooping cranes. By using non-invasive hormone monitoring, we demonstrated that egg laying females produced significantly higher estrogens means than non-laying bird. Successful pairs also performed more reproductive behaviors than non-successful counterparts. Additionally in successful females an elevation of estrogen concentrations coincided with an increase in reproductive behaviors prior to egg laying and copulations. Our findings demonstrate that overall estrogen concentrations and reproductive behaviors are key determinants to successful reproductive output of a breeding pair.*

* 3:50-4:10: **Applied Artificial Insemination and Egg Sexing Techniques** - Warren Lynch, Smithsonian Conservation Biology Institute

*Too often artificial insemination and egg sexing techniques are not employed because of a misconception that they require highly specialized equipment, an advanced degree, and an in depth knowledge of anatomy and physiology. This presentation will give a brief overview of the practical application of artificial insemination and egg sexing techniques and how these management tools can be learned and employed by animal caretakers at all levels.*

* 4:10-4:30: **Reproductive Hormone Assays in Curassows** - Andrew Schumann, White Oak Conservation

*Enzyme-linked immunoassay is an established technology for measuring fecal hormone metabolites. This technology has recently been used to measure fecal testosterone metabolite concentrations in the captive population of critically endangered Blue-billed Curassow, Crax alberti, with the ultimate goal of improving management techniques. The techniques used in this currently ongoing research, such as EIA and marking feces with indigestible metals, have implications in determining fertility issues in a wide array of avian taxa.*

* 4:30-4:50: **3 Methods for Management of Zoological Bird Populations** - Tom Jenson, San Diego Zoo

*Brief overview of two techniques currently in use and one that is in development at the San Diego Zoo Global. The technique of oocyte membrane-bound sperm detection helps establish sperm production, function, and presumed egg fertility, while in ovo sexing allow the management of a population's sex ratios. In addition, we are investigating the possibility of using hormones to induce breeding in non-producing individuals.*

* 4:50-5:10: **Applying Emerging Technologies to Avian Care: Data Loggers, Video Monitoring, and Radio Frequency Identification (RFID)** - Gina Ferrie, Disney’s Animal Kingdom and John Azua, Denver Zoo

*As the tech world continues to develop more gadgets and ways to create and gather data, these devices which have been developed for other applications become more readily available, affordable, and with some creativity, can be used to improve the everyday care and welfare of the animals in our charge. This talk will offer suggestions of ways to use technologies that we take advantage of in our daily lives, such as iPads, video cameras, and RFID, and how they can be used in avian management to improve welfare and reproductive success.*

* 5:10-5:30: Questions for Speakers

**Wednesday, March 25th**

***Richland AB***

9:30 am - 11:30 am

* **Micronesian Kingfisher SSP**

11:30 am - 12:15 pm

* **Galliformes TAG**

1:00 pm - 5:30 pm

**Avian SAG General Session**

* 1:10-1:20: **Welcome** - Sara Hallager, Smithsonian’s National Zoological Park
* 1:20-1:30: **ASAG Website Update** - Kevin Graham, Dallas Zoo
* 1:30-1:50: **Approaching Fall Migration Bird Strikes as a Seasonal Education Campaign** - Chris Sheppard, American Bird Conservancy and Roger Sweeney, Virginia Zoo
* 1:50-2:10: **Simple Predator Protection for Nesting Flamingos** - Amanda Ott, Lead Keeper, Scovill Zoo. ASAG Travel Grant Recipient

*Reproduction for Chilean Flamingos is relatively low considering the large size of the population. The current population has a large number of birds (most of these are potential founders) who are not reproducing. The leading cause is due to flocks being moved indoors at night or not allowed to nest due to predator problems. Scovill Zoo had a history of predator issues with raccoons that caused us to begin moving our flock of 9 flamingos indoors at night. When our flock started showing interest in breeding we came up with a budget-friendly, practical solution to allow them to continue their nesting and reproduction behaviors. This presentation describes using a small, pre-fabricated aviary as a safe nesting area for the flamingos. The birds remained on exhibit throughout the process of nesting and chick-rearing. The successful solution could be easily adapted by other zoos to increase flamingo reproduction.*

* 2:10-2:30: **Unique Medical and Management Techniques used in Working with Chilean, Caribbean, and Lesser Flamingos** - Shelly Collinsworth, Fort Worth Zoo
* 2:30-2:50: **Evaluation of Ambassador Magelllanic Penguins Behavioral and Corticosterone Responses to Behind the Scenes Tours** - Julie Hartell-DeNardo, Zookeeper, Saint Louis Zoo. ASAG Travel Grant Recipient

*This presentation will discuss the establishment of an excrement glucocorticoid metabolite (GCM) assay for Magellanic penguins and its application as a tool, in conjunction with behavioral observations, to evaluate individual responses to participation in a behind the scenes tour program. Study results indicate that some individuals maybe more suited to the role of ambassador animals, and individual responses should be considered when choosing animals for guest interactions.*

* 3:00-3:30: Break
* 3:30-3:50: **Red Siskin Conservation: Field and Genomic Research, Captive Breeding, Reintroduction and Agroforestry** - Brian Coyle, Smithsonian National Museum Natural History and Warren Lynch, Smithsonian Conservation Biology Institute
* 3:50-4:10: **The Joys, Challenges and Oddities of housing a family of group of green-naped pheasant pigeons at the National Aviary** - Nikki Majeran, Senior Aviculturist, National Aviary. ASAG Travel Grant Recipient

*The National Aviary has housed a pair of Green-naped Pheasant Pigeons (Otidiphaps nobilis nobilis) since 2001. These birds were kept in the National Aviary’s large Tropical Forest, with little breeding success until 2012 when they were moved to the Wetlands exhibit. The pair successfully raised three chicks in less than a year with no keeper assistance. We found that we were able to house five Green-naped Pheasant Pigeons on exhibit at the same time, the adult pair and their three offspring. The parents allowed keeper access to the nest and each chick, which keepers used to obtain development data. The adult pair did not show any signs of aggression toward the young chicks when they were near the nest. Our first chick, a female, started to lay eggs at one year of age. Each times she chose to lay her eggs in the same nest as her dam, and we found both eggs being incubated by both females and the sire! We often only saw daughter at the nest site when the sire was present. This family group experience brings up the questions: Is it possible to manage 1.2 Green-naped Pheasant Pigeons for successful breeding?*

* 4:10-4:30: **Mabula Ground Hornbill Conservation Update** - Roger Sweeney, Virginia Zoo
* 4:30-4:40: **TAG Updates - Turaco/cuckoo and Parrot; Ratite TAG and Uganda Care for Karamoja Ostrich**
* 4:40-4:50: **ASAG Action Plan** - Tom Schneider, Detroit Zoo
* 4:50-5:20: **Update on Avian Influenza** - Dr. Darrel Styles, USDA
* 5:20-5:30: **Plume Awards**

**Thursday, March 26th**

***Richland AB***

8:00 am - 12:00 pm

**Avian SAG Red to Yellow Workshop**

*This workshop will focus on managed species that are making progress (from Red to Yellow, or Yellow to Green…). We all know we’ve got populations that aren’t sustainable, and programs that need help, but our goal for this workshop will be to focus on case studies focusing on strategies that are working (or have worked). We hope Program Leaders might find inspiration and Animal Managers might identify ways their institutions can further support efforts at building more sustainable captive bird populations.*

* 8:00-8:10: **Introduction** - Harrison Edell, Dallas Zoo
* 8:10-8:30: **Tawny Frogmouth** - Mark Myers, Woodland Park Zoo
* 8:30-8:50: **White Stork** - Tom Schneider, Detroit Zoo
* 8:50-9:10: **Temminck’s Fruit Dove** - Monica Blackwell, Toledo Zoo
* 9:10-9:30: **Passerines** - Jennifer Evans, Tracy Aviary
* 9:30-9:50: **Blue Crowned Laughing Thrush and Global Species Management Plans** - Mark Myers, Woodland Park Zoo
* 9:50-10:10: Break
* 10:10-10:30: **Spectacled Owl and African Penguin** - Steve Sarro, Smithsonian National Zoological Park
* 10:30-10:50: **Raggiana Bird of Paradise** - Jessica Theule, San Diego Zoo
* 10:50-11:10: **Marbled Teal** - Harrison Edell, Dallas Zoo
* 11:10-11:30: **Import Mentors, Prioritizing Resources and Species**
* 11:30-12:00: **Follow-up, Q&A**

1:00 pm - 5:00 pm

**Starling Animal Care Manual Working Session**