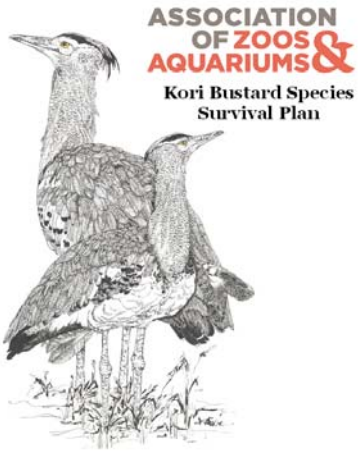
December 2016, Volume 14

THE GOMPOU

The Kori Bustard SSP Newsletter

Photo by Adam Thompson, Zoo Atlanta



The Gompou is an annual newsletter of the AZA Kori Bustard Species Survival Plan

It is edited by Kori Bustard SSP Representative Lisa Murphy

http://www.koribustardssp.org/

BUSTARD EVOLUTION

A Brief Evolutionary History of the Kori Bustard
Jenna Curtis

Where do kori bustards come from? I'm not talking about when two koris *ahem* love each other very much, or even where they are found geographically. On a much, *much* longer time frame: what is the origin of *Ardeotis kori* as we know it today? The past decade revealed much interesting data regarding the evolution of modern bustards. Here, I present a brief summary of research on how the koris we love came to be.

Kori bustards belong to the family Otididae, in the order Otidiformes, which also includes cranes and their allies. Otididae consists of 11 genera and 25 extant species. Koris are classified genus *Ardeotis*, which also includes the Australian (*A. australis*), Arabian (*A. arabs*), and Great Indian (*A. nigriceps*) bustards. In the past, classification of bustard species was challenging due to a wide diversity of body sizes, life history traits, plumages, and behaviors across even members of the same genus. In other words, speciation and specialization may lead two bustard species closely related on a genetic level to appear entirely unrelated to the human eye.

Limited fossil evidence makes it difficult for scientists to follow the evolution of modern bustards from their prehistoric ancestors. The oldest Otididae fossils come from Europe in the middle Eocene period, approximately 38 million years ago. To put this in perspective, ancestral relatives of today's kori bustard lived alongside pygmy hippos, prehistoric hyenas, and the earliest horses (which still had toes). Other prehistoric bustard fossils from now-extinct lineages occur from Ukraine and Georgia to China, dating between 23 and 5 million years old. The fossil history for great bustards (*Otis tarda*) is the most extensive, and shows a widespread distribution across the European continent over 15,000 years ago, when primitive humans were still hunting Wooly Rhinos. Some prehistoric fossils suggest ancestral bustards were even larger and heavier than koris today!

Above: The Arabian bustard (*Ardeotis arabs*, left) is the kori bustard's closest living relative. Despite the name, its distribution includes east Africa. Denham's bustard (*Neotis denhami*, right) and other *Neotis* bustards also share a close ancestor with kori bustards.
Photo credits Allan Drewitt and Bernard Dupont.

When and how did modern bustards originate from these early ancestors? One analysis of mitochondrial DNA (Pitra et al. 2002) suggests divergence between cranes and bustards first occurred 76-79 million years ago, while dinosaurs like velociraptor still roamed the earth. This ancient ancestor spawned a number of bustard lineages, only a few of which are still extant today. The most recent common ancestor of modern, extant bustard species likely evolved 22-26 million years ago. However, a different study (Broders et al. 2003), using fewer species but longer and more complete DNA sequences, found the origin of modern bustards may be as far back as 40-50 million years. This could explain the presence of ancient bustard fossils across Eurasia.

Bustard Evolution continued……

Both studies agree on a rapid and recent divergence of modern bustard species. This means the common ancestor of modern bustards quickly speciated into a number of forms fairly recently in our earth's history. Broders et al. (2003) argue this species radiation occurred during the Cretaceous/Tertiary boundary; a time when a great many other modern bird species are believed to have originated. Unfortunately, the nature of rapid, radiative speciation makes it hard for scientists to create an exact evolutionary timeline for koris and other bustards.

What we do know is kori and Arabian bustards are most closely related and share a recent common ancestor. It is believed the neck "ballooning" display behavior seen in both Arabian and kori bustards is an ancestral trait, likely possessed by this shared predecessor (Broders et al. 2003). Genus *Ardeotis* is also closely related with genus *Neotis*, including Denham's, Ludwig's, and Heuglin's bustards. These three *Neotis* bustards have overlapping distributions with koris, and similar physical features. As Pitra et al. (2002) note, the affinity among these taxa is supported behaviorally; they all adopt a similar male display of standing neck inflation. Additionally, Broders et al. (2003) found a close relationship between *Ardeotis* and Ruppell's korhann (*Eupodotis reupelli*). Though classified with other korhaans, it is now believed Ruppell's korhann – a small, drab bustard of Angola and Namibia – is more closely associated with koris and their relatives.

Left: Recent genetic analysis revealed a surprising relationship between bustards and turacos, like this Red-crested turaco (*Tauraco erythrolophus*). Despite little in common physically, these birds may in fact be sister clades. More research is needed to confirm the extent of this unexpected relationship. Photo credit Dick Daniels.

Where did all this speciation begin? Molecular evidence points to an Afro-tropical origin of modern bustards. Pitra et al. (2002) found the most likely ancestral area of bustards is southern and eastern sub-Saharan Africa, from the Zambezi east along the Great Rift Valley. Many Otididae species, including koris, are still found in this region today. This also means Australian bustards (*A. australis*), another close relative of the kori, colonized the Australian continent only very recently on a geologic time-scale.

It's important to note that most of these studies assume a relationship between Otididae and Gruiidae (the family that contains cranes). In 2015, new molecular methods were used to group bustards in a clade with cuckoos, turacos, pigeons, and sandgrouse (Prum et al.). A 2013 phylogenetic study of global birds (McCormack et al. 2013) also found a strongly supported sister relationship between bustards and turacos. Given the striking physical differences between these families, this is the first time a relationship between bustards and turacos has been considered. While both taxa occur in Africa, bustards are generally large-bodied terrestrial omnivores, while turacos are brightly colored, arboreal frugivores. More research is needed to confirm and define the extent of this relationship.

To summarize, the ancestor of modern bustards likely originated in southern or eastern Africa between 23 and 50 million years ago. The 25 extant bustard species today rapidly evolved from this shared predecessor as they spread north across Europe and Asia. While a close relationship between *Ardeotis* and *Neotis* bustards is likely, we still lack information to establish their exact evolutionary lineage. Perhaps someday scientists will find the "Lucy" of koris; a missing link or early fossil giving us some clue as to what the ancestor of today's birds looked like.

Citations:

Broders, O., T. Osborne, and M. Wink. (2003) "A mtDNA phylogeny of bustards (family Otididae) based on nucleotide sequences of the cytochrome *b*-gene." J. Ornithology 144: 176-185.

McCormack, J.E., M.G. Harvey, B.C. Faircloth, N.G. Crawford, T.C. Glenn, et al. (2013) "A phylogeny of birds based on over 1500 loci collected by target enrichment and high-throughput sequencing." PLoS ONE 8(1): e54848.

Pitra, C., D. Lieckfeldt, S. Frahnert, and J. Fickel. (2002) "Phylogenetic relationships and ancestral areas of the bustards (Gruiformes: otididae), inferred from mitochondrial DNA and nuclear intron sequence." Mol. Phyl. and Evo. 23(1): 63-74.

Prum, R.O., J.S. Berv, A. Dornburg, D.J. Field, J.P. Townsend, E. Moriarty Lemmon, and A.R. Lemmon. (2013) "A comprehensive phylogeny of birds (Aves) using targeted next-generation DNA sequencing." Nature 526: 569-578.

SCIENCE

Porphyrins produce uniquely ephemeral animal colouration: a possible signal of virginity

Galvan, I. *et al.* Porphyrins produce uniquely ephemeral animal colouration: a possible signal of virginity. *Sci. Rep.* 6, 39210; doi: 10.1038/srep39210 (2016).

Colours that underlie animal pigmentation can either be permanent or renewable in the short term. Here we describe the discovery of a conspicuous salmon-pink colouration in the base of bustard feathers and down that has never been reported because of its extraordinarily brief expression. HPLC analyses indicated that its constituent pigments are coproporphyrin III and protoporphyrin IX, which are prone to photodegradation. Accordingly, an experimental exposure of feathers of three bustard species to sunlight produced a rapid disappearance of the salmon-pink colouration, together with a marked decrease in reflectance around 670 nm coinciding with the absorption of porphyrin photoproducts. The disappearance of the salmon-pink colouration can occur in a period as short as 12 min, likely making it the most ephemeral colour phenotype in any extant bird. The presence of this colour trait in males performing sexual displays may thus indicate to females a high probability that the males were performing their first displays and would engage in their first copulations in the breeding season. In dominant males, sperm quality decreases over successive copulations, thus porphyrin-based colouration may evolve as a signal of virginity that allows females to maximize their fitness in lek mating systems.

Photo from Galvan, I. *et al.* Porphyrins produce uniquely ephemeral animal colouration: a possible signal of virginity. *Sci. Rep.* 6, 39210; doi: 10.1038/srep39210 (2016).

KORIS IN TANZANIA

EMMANUAL MMASSY

Kori bustard (Ardeotis kori struthiunculus) occurrence in the Serengeti grass plains, northern Tanzania.

Emmanuel C. Mmassy, Robert D. Fyumagwa, Craig R. Jackson, Kjetil Bevanger and Eivin Røskaft

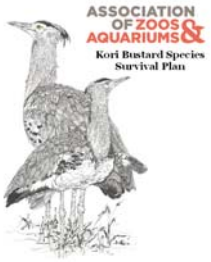
Abstract

The kori bustard (Ardeotis kori struthiunculus) is indigenous to grasslands and lightly wooded savannahs of southern and eastern Africa. The species is categorized as near threatened in its entire range due to anthropogenic factors and low reproductive rates. The aim of this study was to analyse the impact of grass colour, grass height, season and location on the density/occurrence of this bird species in the Serengeti grass plains, Tanzania. Data were collected from January 2014 to June 2015 using transect counts in four seasons: (i) short dry, (ii) long rain, (iii) long dry and (iv) short rain seasons, respectively. The mean density of kori bustard in the grass plains was 0.25 _ 1.01 per 0.2 km2 with near-significant differences among the study sites. The occurrence of kori bustard was high in the medium height (11–30 cm) during the long rain and short dry seasons. The kori bustard density is relatively low, and the distribution varies with grass height and season. We suggest that conservation efforts should be directed at preventing its local extinction by protecting the habitat from excessive human activities, such as livestock grazing and illegal offtake.

Conclusions and recommendations

In conclusion, kori bustard density varied between the four study sites, but was statistically insignificant; however, seasonal variations in density were significantly different. The density was high during the long rain and short dry seasons. The study also confirmed that the distribution of kori bustard in the study sites was influenced more by grass height (11–30 cm) than by grass colour. Our predictions corresponded better with the season representing the main contributing factor for kori bustard density. Due to a lack of data and research, kori bustard density recorded in our study in the Serengeti grass plains cannot be categorized as low or high. The species is listed as near threatened by the IUCN, and it is consequently important that the management authorities take appropriate actions to ensure the survival of the species. Protection of suitable habitats of the species within the Serengeti Ecosystem together with public education is imperative. The increasing illegal exploitation of natural resources by local people from communities alongside the Serengeti National Park makes community participation in the conservation and management of the species important. The large seasonal variations in density indicate that the population may utilize large parts of the ecosystem, thereby increasing the likelihood of encountering detrimental anthropogenic activities. Based on an earlier study of illegal offtake of grassland birds and eggs for home consumption (Magige et al., 2009), we advise protected area managers to address such threats posed by illegal offtake.

This research was supported in part by the kori bustard SSP.

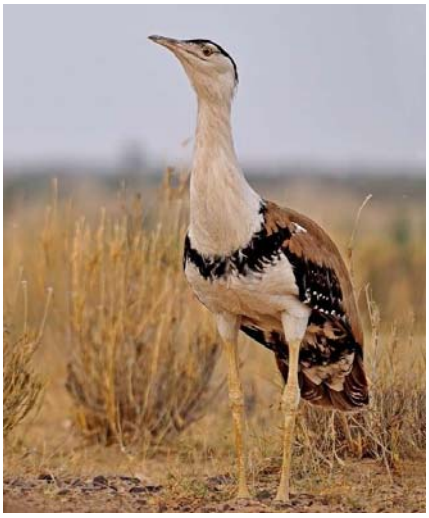


OTHER BUSTARD SPECIES

Great Indian Bustard

A study done on droppings of GIB by researchers has for the first time recorded presence of Cestode parasite from the genus of parasitic tapeworms 'Choanotaenia' in it. Occurrence of the parasite has raised serious concerns as pathological findings suggest that Cestode infection can cause morbidity in GIBs and pose a major threat to their population. There are fewer than 250 great Indian bustards left in the wild.

http://timesofindia.indiatimes.com/city/nagpur/Study-finds-parasite-posing-threat-to-Great-Indian-Bustard/articleshow/54489063.cms



Australian Bustard

Video of a female Australian Bustard feeding its chick at Serendip Sanctuary on November 1, 2016.

https://vimeo.com/191467300

OTHER BUSTARD SPECIES

Arabian bustard Tracking
Thomas Rabeil and Yves Hingrat

Sahelo-Saharan bustards are among some of the least studied birds globally. Over the past decade, regular surveys have been carried out by SCF in Niger's Termit & Tin Toumma National Nature Reserve. The reserve hosts two species of bustard, the Nubian and the Ara-bian. The latter is listed as Near Threatened by IUCN. Bustards in general have become extinct over large areas due to agricultural encroachment, over-grazing and especially unsustainable hunting. Rangers in Termit & Tin Toumma, supported by SCF and its partners, have dismantled bustard poaching networks.

To better understand the biology, ecology and behaviour of the Arabian bustard, SCF has partnered with Abu Dhabi-based Reneco International Wildlife Consultants to conduct the first satellite monitoring survey of wild Arabian bustards in Africa. The main aims are to gather data on the bird's survival, movements and breeding. To im-prove conservation measures we need to know where bustards go through-out the year, what constraints are there on their movements, and where and when do they breed.

The end of July, 2016, saw SCF's Thomas Rabeil and Reneco's Yves Hingrat counting and trapping Arabian bustards on the western edge of the Termit & Tin Toumma reserve. Park rangers and staff from SCF partners, the Niger Fauna Corridor and Niger-Chad Trans-boundary projects, were part of a team that also included four traditional hunters, appointed by the Sultan of Zinder.

Bustard density was relatively high, with around 1 bird per 2 km². July corresponds to the beginning of the bustard breeding season, with males observed displaying and one female located on a nest. The capture tech-nique consists of a line of snares set on the ground between shrubs, which are used by the bustards when hid-ing from potential threats. The capture technique was both effective and harmless, with birds released after 10-15 minutes, during which body measurements and blood samples were taken, and GPS satellite transmitters fixed. In total, nine adult Arabian bustards (6 females and 3 males) were equipped with transmitters kindly donated by the International Fund for Houbara Conservation.

Currently, eight of the nine tags are still transmitting. One device stopped signaling after a month's activity due likely to equipment failure because there was no sign of poaching or natural mortality at the last location transmitted.

Initial data shows that four of the females moved very little following capture due to incubation and chick rearing in the area where they had been captured. After four months of monitoring, southward movements, first by two males and then by two females, were observed, suggesting a seasonal movement pattern confirming assumptions based on our data from surveys in Niger and Chad.

Our hope is the tagged bustards will continue sending information at least until the next breeding season to get a complete annual cycle of monitoring data to provide estimates on their survival, home range and seasonal movements. Gathering knowledge on the species is important but not enough to reverse the decline in numbers. In many ways, the expertise of the traditional hunters was key to the mission's success. They can also play a pivotal role in raising awareness among local people, including traditional leaders and hunters, about the emergency facing wildlife and especially bustard species. Their participation in the mission was essential in paving the way for long-term collaboration for the preservation of the endangered wild-life in this part of Niger.

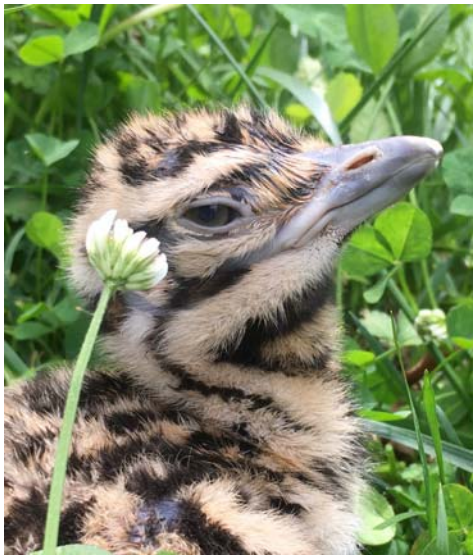
Arabian Bustard Ardeotis arabs fitted with a GPS satellite transmitter (Photo: Thomas Rabeil/SCF and Yves Hingrat/Reneco)

SSP POPULATION NEWS

Fort Worth Zoo produced 5 chicks in 2016. Here are four of them! Congratulations Fort Worth Zoo!

Photo: Shelly Collinsworth

Zoo Atlanta's chicks enjoyed posing in clover fields, and with close friends. Photos: Taylor Rubin



SSP POPULATION NEWS

Kori chick, Cameron Park Zoo

Spider-man bobble head helps track size of chick at 7 days and 15 days

Photos by Shawn Styrcula

KORI HEROS OF THE YEAR

KYLE LOOMIS & MELISSA KING, ZOO ATLANTA

Kyle Loomis- Zoo Atlanta, Birds and Program Animals, Keeper II

Growing up, I always knew I wanted to work with animals in some capacity, but didn't have any specialized passion. It wasn't until college that I discovered a more specific interest in learning about birds. When I started my first zoo job at Zoo Atlanta, I was drawn towards the kori bustards. I can remember stopping at their exhibit on my way back from my job interview and watching them for at least 15 minutes.

As I grew in my career at Zoo Atlanta, two specific people played key roles in nurturing my interest in this species. Katie Bagley-Vyas, my former lead keeper and current vice chair for the Kori Bustard SSP, was so knowledgeable about kori bustards that it was hard not soak up information. She set a great example with her level of concern and attention to detail for the birds' husbandry and welfare needs. The other person I have to thank is Melissa King, our Interpretive Programs Supervisor and Education Supervisor for the SSP. I have never met someone so enthusiastic for a particular species, especially when it comes to educating guests. I have learned some much from the two of them.

2016 has been a very successful year for Zoo Atlanta in terms of promoting the conservation of kori bustards. Cokes for Koris is a fundraiser, started by Katie Bagley-Vyas, in which we sell sodas to zoo staff to fund the Kori Bustard SSP. Melissa King and I operate two different soda stations in the zoo for staff to utilize. This has been our most successful year! We were also able to put together our first Kori Bustard Awareness Day in conjunction with other zoos. Our first attempt proved very successful, with a day filled with kori related games, activities, and keeper talks. Another highlight was getting to be a part of the Kori Bustard SSP promotional video for the new website. Admittedly, I don't like seeing myself on camera, but if it means promoting these remarkable birds I can be encouraged to do just about anything.

My hope is that more people will become aware of the need to protect kori bustards. They are an integral part of the ecosystem and more study needs to be done so we can understand how best to help them. I would also love to see more institutions begin to seek out the possibility of housing the species in their collection. We all have a part to play in conservation, even if it starts small, and I am grateful to take part in this effort.

Melissa King— Zoo Atlanta

As a zoo educator and bird nerd, I'm honored to be chosen as a kori bustard hero of the year! I am Zoo Atlanta's Interpretive Programs Supervisor and Education Advisor for the Kori Bustard SSP. I grew up visiting Zoo Atlanta with my family and have close ties to our Zoo both personally and professionally. I went to Georgia State University, majoring in psychology and sociology. My foray into the field began ten years ago when I started volunteering, then interning, working part-time in Education, and then eventually began my career there.

Interpretation and conservation are my passions, and I have an affinity for birds, usually parrots. I began working with the SSP as Education Advisor in 2013. I was drawn to koris in our Zoo due to their size, breeding displays, adorable chicks, and how little I knew about them initially. The more time I spent near koris, the more my appreciation for them grew. Our big male, Snake, and smaller female, Tuza, definitely charmed me as I got to know them and their individual habits.

Over the past few years, I've been fortunate to have been able to participate in many projects with koris through the SSP, and also gotten to be creative. This past year, I collaborated with bird keeper and SSP IR Kyle Loomis, Chair Sara Hallager, and Vice Chair Katie Vyas, on a video to inform the public and other institutions about the benefits of having koris in their bird collection. Anna Turkett, keeper and interpreter at the Birmingham Zoo, included me in the planning for their first Kori Bustard Day to celebrate the species, and Zoo Atlanta was able to participate and promote the day a well. I also collaborated with a local tattoo artist create a Kori Bustard coloring book, "K is for Kori Bustard," which is detailed elsewhere in this year's Gompou.

In years past, I've hosted a number of fundraiser movie nights, created and sold buttons and other kori merchandise to benefit the SSP. I'm brainstorming some other fundraisers for 2017. Birdorable (www.birdorable.com) finally added a kori bustard design to their online collection after I communicated with their creators. I worked with John from FeathersMC to enable online donations through our website and his fishing lure project, which has been very effective. Speaking of the website, that's been one of my most creative projects! Since a complete overhaul in 2014, I've been constantly working on new ideas for the website and developing more educational content to upload as a resource for teachers and Zoos. One of my goals is to collaborate more on a local and global level to create more content for the site and for it to become a bigger and better resource over time for all things kori. I've piloted some of this content at Zoo Atlanta and have enjoyed being able to expand our kori representation in education programming. Another goal I have is to network more internationally to create more projects and opportunities for education and conservation through the kori SSP. I'm gaining experience in writing proposals for funding for kori conservation through various means, which has been a great learning experience and a chance for me to develop new skills.

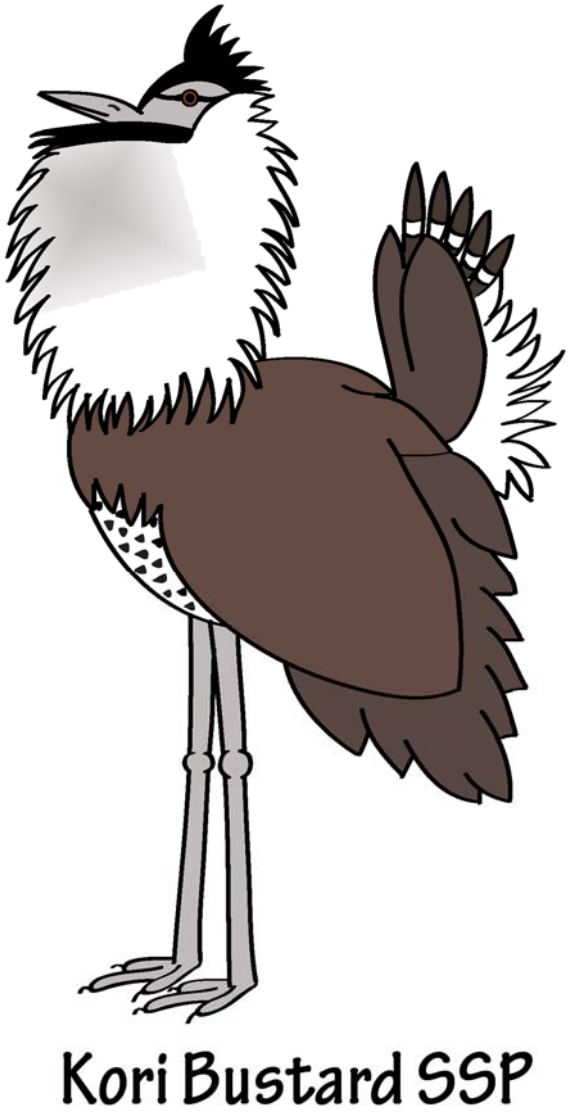
When our first kori chicks hatched at Zoo Atlanta earlier this year, I could not have been more excited. I know this is where I'm supposed to be! Being a part of the SSP has been an incredibly rewarding, fun experience in which I feel that I've been able to contribute my time and talents, but also have learned much from the opportunities, people, and birds I've had the pleasure of working with.

EDUCATION UPDATE

MELISSA KING

The AZA kori bustard Species Survival Plan has produced a short video about the kori check it out at: http://www.koribustardssp.org/about-us.html

While you're there, be sure to check out the entire site!



EDUCATION UPDATE

This sign was made as part of a larger project by keeper Anna Turkett, Birmingham Zoo to turn some of the zoo's bird collection into real-life Pokemon. "Pokemon GO" is an augmented reality game that exploded in popularity in July 2016, boasting over 40 million active users. The Kori Bustard sign is designed after the in-game display of a user's individual Pokemon. It features accurate Pokemon elements including Stardust and Candy - used to strengthen and evolve Pokemon - and CP or Combat Power, used in battles. The goal of this project was to harness the popularity of the game to engage visitors with birds – especially Kori Bustards!

KORI BUSTARD AWARENESS DAY 2016

Melissa King, Interpretive Programs Supervisor, Zoo Atlanta

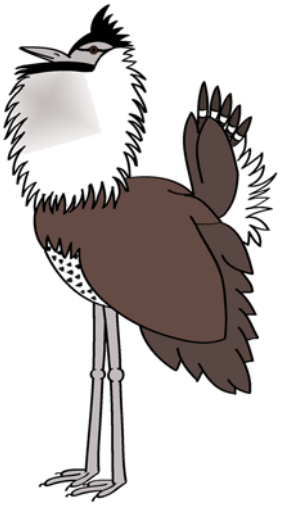
When Anna Turkett, bird keeper and interpreter at the Birmingham Zoo, shared her idea of a day to celebrate koris at their Zoo, I was immediately on board! Once I got the date approved and on the calendar for Zoo Atlanta, Anna and I communicated regularly about our zoo's activities for the day.

Zoo Atlanta set up three stations near our kori bustard exhibit. One station was coloring with our new, "K is for Kori Bustard" coloring book, and worksheet activities, staffed by our Teen volunteers. The second station was a "Kori Bustard Behaviors" activity, in which participants take a sheet with various behaviors illustrated and explained, and then watch the birds to see which of the behaviors they exhibit. At the third station, we had our "Forage Like a Kori" game, and kids can use tongs as a beak, and forage in the artificial grass for insects and small animals. We interpret about feeding adaptations and the koris omnivorous diet here.

In addition to these activities, we had a keeper talk, interpreters roaming the area with biofacts (feathers and kori skull replica), and an Instagram frame to pose with for photos. We sold buttons for $3 each, with the proceeds going entirely to the SSP. We raised $107 from buttons that day, but the buttons have been a huge hit with staff and volunteers, so we've been selling additional buttons since March.

If you are interested in joining us in celebrating Kori Bustard Day in 2017, please contact mking@zooatlanta.org. We encourage other institutions to participate on March 25, but if there is another day that works better for your Zoo's events (or your climate!), we would still love for you to celebrate koris with your guests! The scale of activities is entirely up to your discretion but if you are interested in using any of our materials or planning, we are happy to share those and will e-mail those out.

Zoo Atlanta Kori Day Activities



Kori Bustard SSP

K is for Kori Bustard – A Coloring Collaboration

Melissa King: "Since koris are underrepresented in children's books and activities, I wanted to create something that would be a readily available resource for zoos with kori bustards to share with their guests and education program participants. The project idea was a coloring book with the "ABCs" or kori bustards. I had my idea and my text written, with each letter representing a characteristic or kori-related topic, along with a short description. (A is for Africa, B is for Beak…etc.) The next hurdle was the most important part of a coloring book….the illustrations! Luckily, I reached out through social media and found an artist!

Chris O'mallon is a local Atlanta artist. He spends his days as a tattoo apprentice at Permanent Ink, a tattoo shop in Clarkston, Georgia. When you enter his room in the shop, you immediately notice his original works of animal art adorning the walls. Not only realistic portraits of animals, his work often incorporates creative twists. Here's a little inside information about the artist that stepped up to help bring life to the coloring book project.

What made you pursue art?

My parents were always artistic and encouraged me to let my imagination go wild so it kind of just stuck with me into adulthood**.**

I've noticed your create a lot of art focused on animals. Where does that inspiration come from? How do you choose subjects?

Yeah, animals definitely are my topic of choice because not only are there so many awesomely unique animals out there- they're the one part of life that is truly free to live how they see fit and I think that's admirable and should be immortalized through art.

What interested you about this project?

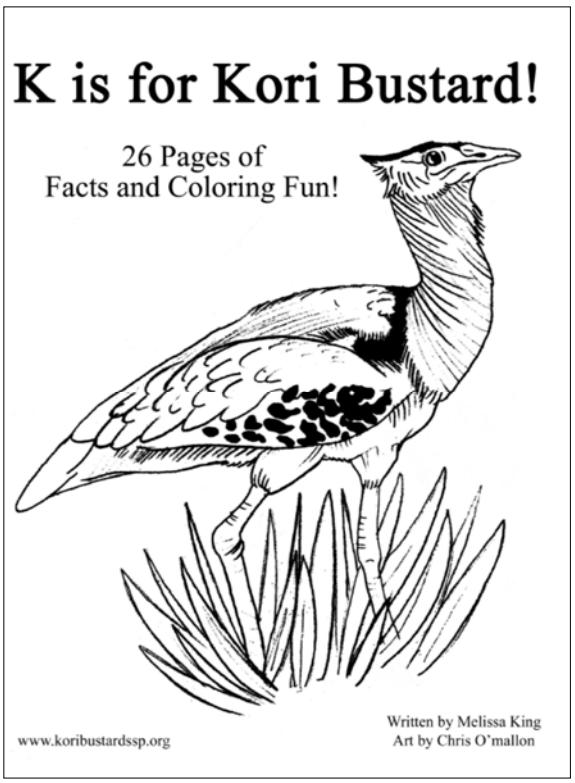
I feel like there are so many animals out there that are so amazing yet get no recognition, so when I got the awesome opportunity to not only spread the word about the Kori Bustard but also help raise awareness about their dire situation I was honored. It's not always just about making money with your art -but making an impact.

You are also a tattoo artist! Can you tell us about how and why you got into that and about your work?

Sure am! My dad was a huge fan of tattoos and would always let me draw on his arms and bring me watch him get tattooed (back when it was less strict). That always stuck in my head so one day I thought about my options to make a livable income off my art and figured I'd might was well try my hand at obtaining an apprenticeship before I enrolled into college and it was the best choice of my life!

Chris can be contacted at Chrislalala@Yahoo.com, and you can follow his Instagram, Cosmicvgg.

Permanent Ink Tattoo is located In Clarkston, Georgia. Follow them on Facebook.



Birmingham Zoo
Kori Day Activities

Kori Bustard Awareness Day March 26th 2016

Birmingham Zoo

Birmingham Zoo celebrated kori bustards on March 26th 2016 by inviting local fly fishermen to demonstrate fly-tying during the day. A local graphic designer/artist did face painting. There were stations for Kori coloring, the Forage Like a Kori Game (modeled after Zoo Atlanta's) and Keepers offered special enrichment feedings. It was a great day of celebrating all things kori! In the future, we hope many zoos will take on Kori Bustard Day and try to aim for a popular time for your own zoo in order to spread the word of the bird!

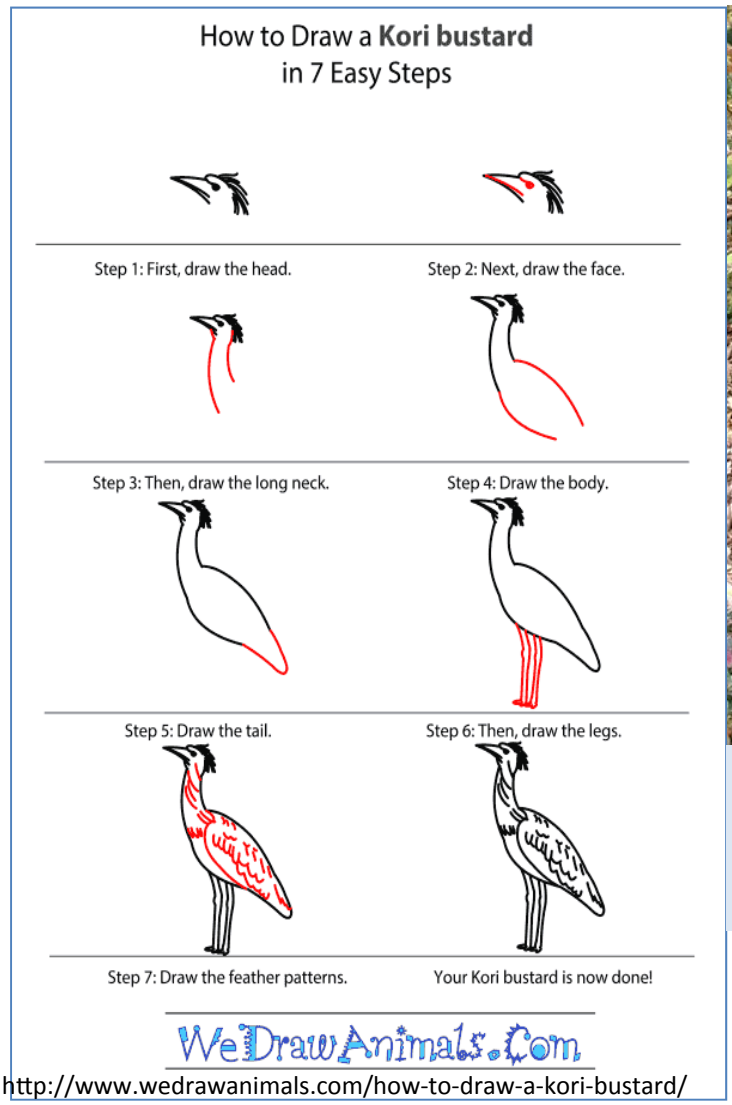
Anna Turkett, Lorikeet Keeper and Interpreter, Birmingham Zoo

The large flock of Kori Bustards at the Birmingham Zoo lives in a tucked away area that used to house kangaroos. As soon as guests would see the birds and I could talk about them, the connection was there. But my challenge was bringing people into the exhibit area. I decided to create a special day to introduce people to the Kori Bustard and celebrate the incredible bird.

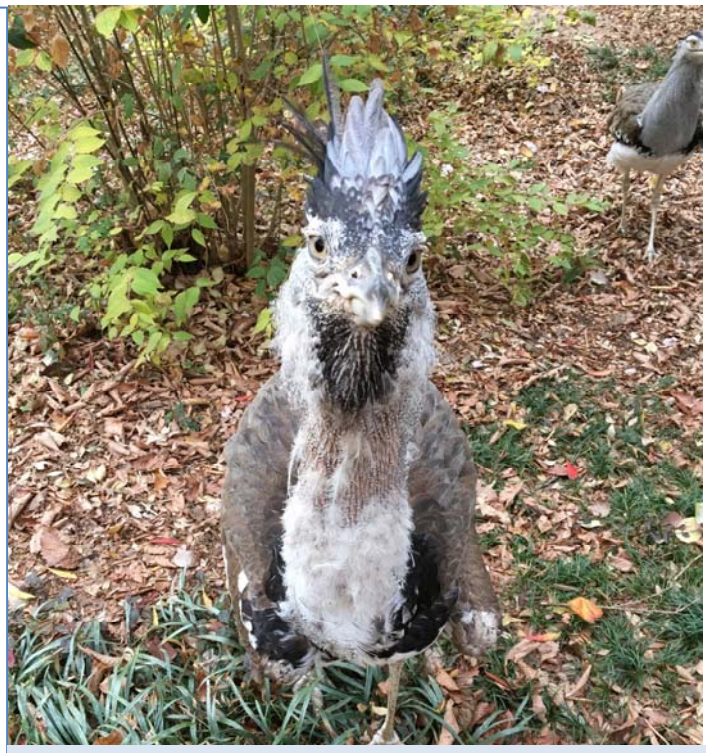
The first Kori Bustard Day was held on March 26th 2016. Most zoo visitors haven't even said the word Kori Bustard and an "animal holiday" of sorts is a positive, exciting way to introduce the animal. The day included many activities, including face painting, coloring, and Zoo Atlanta's "Forage like a Kori" game. I did many keeper chats and feedings, as well as peanut butter enrichment for the birds. A biofact station was set up with feathers to touch and eggs to see. I also found a wonderful local flyfishing shop that sent two master fly-tiers to show how Kori feathers are used in salmon flies.

Overall the day was a smash hit, with a couple hundred participants. The day was chosen because it was set to be an incredibly popular day at the zoo - the first Saturday of Spring Break. It is both a celebration and a strategy - trying to use high visitor numbers as a tool to show them the Kori Bustard.

ODDS & ENDS



http://www.wedrawanimals.com/how-to-draw-a-kori-bustard/



This is a picture of one of Zoo Atlanta's males showing a pretty extreme example of post breeding molt. Phoenix Zoo had two males who also lost most of their neck feathers at the same time this year. Photo by Alexa Jansen

The Centro de Cría de Aves Esteparias, Spain http://www.avutardas.com/Inicio.html has been breeding kori bustards since 2014 from wild caught stock . They currently have 2.3 adults and 5 chicks. The 2014 edition of The Gompou described their breeding success with koris. The Centro de Cría de Aves Esteparias is the only facility in Europe breeding kori bustards. Article submitted by Ricardo Sobrino. In addition to breeding kori bustards, The Centro de Cría de Aves Esteparias has also bred great bustard, little bustard and white bellied bustard.

All photos by Lisa Barker

Kori bustard sisters “Chasi” and “Tatu” at the National Zoo are never far apart from each other. Together since birth in 2008, they can nearly always be found in close proximity to each other in their yard. Frequently, they mimic each others behaviors so much so, that kori bustard behavior watcher Lisa Barker refers to them as “Chatu”.

TRAINING & ENRICHMENT

Fort Worth Zoo trains kori bustard chicks with a laser pointer to target onto scales so that weighing them when they are full grown is much easier and safer. They get rewarded with whole prey from their diet. Plus they have fun chasing the "bug."
Photo: Amanda Zalewski

A kori bustard at National Zoo enjoys a pumpkin.

Photo by Sara Hallager

Kori bustard Enrichment

Kori bustards are curious, intelligent animals. The table below lists a range of food items that can promote foraging behavior. Most of the items can be scattered around enclosures to encourage foraging/searching and object manipulation behaviors. Approval from area veterinarians, managers, and nutritionists should always be obtained prior to using any new enrichment item.

From: AZA Gruiformes TAG 2009. Kori Bustard (*Ardeotis kori*) Care Manual. Association of Zoos and Aquariums, Silver Spring, MD. pp.113.

Food Item	Description
Live Insects	Kori bustards respond well to live insects, such as super worms, crickets, regular mealworms, and waxworms. Birds that are off their food for various medical reasons will often start eating again if live insects are offered.
Whole peanuts in the shell	Whole peanuts are also useful for medicating birds. A small portion of the top of the peanut can be taken off, the nut inside removed, and a pill inserted in its place. The peanut shell can be replaced and secured with peanut butter. Peanuts covered with peanut butter work well for medicating birds when individuals become suspicious of medicated mice.
Peanut butter	A few tablespoons of peanut butter can be spread on the trunks of trees in the wintertime as a source of extra calories. The behavior required by the birds to obtain this food item replicates the behavior of wild birds eating sap from acacia trees.
Live prey	If available, live mice will be relished by kori bustards. The birds are also good at capturing and consuming small snakes, lizards, toads, and small birds that make their way into their pens.
Alfalfa	Hanging bunches of alfalfa or other browse items from trees or other enclosure structures can also promote foraging.

FUNDRAISING

KORI BUSTARD

SPECIES SURVIVAL PLAN

STATUES = $20

KEY CHAINS = $10

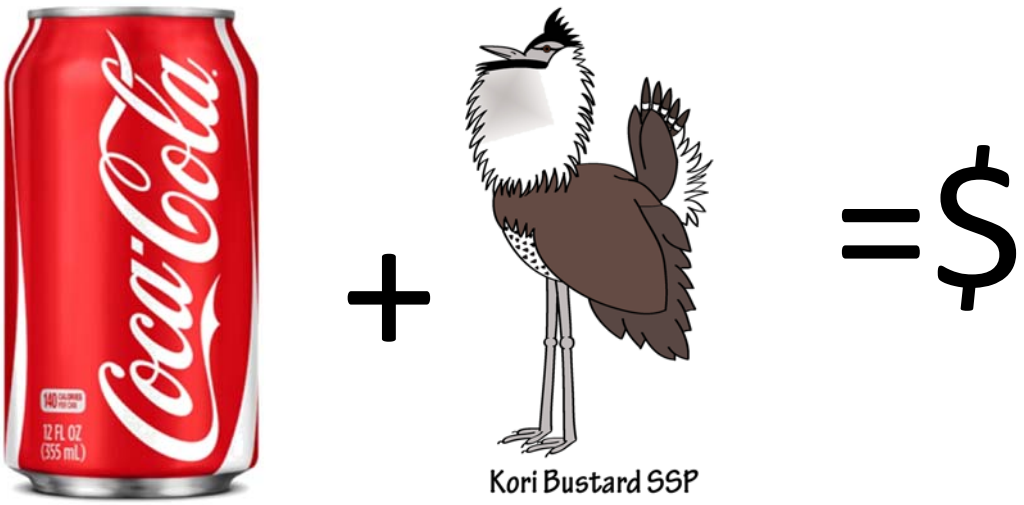
MADE IN ZIMBABWE

Contact Melissa King
MKing@zooatlanta.org or
Kyle Loomis
KLoomis@zooatlanta.org

to purchase items

KoribustardSSP.org

COKES FOR KORIS



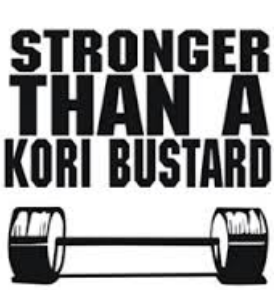
Cokes for Koris Fundraiser 2016 Update

Cokes for Koris at Zoo Atlanta continues to be a thriving fundraiser for the Kori Bustard SSP. For those unfamiliar with how this works, sodas are sold for 50 cents to the zoo's staff at a couple locations throughout the Zoo Atlanta. All proceeds are used to benefit the SSP, as well as restock our "shelves". Since 2011, we have seen this effort increase in popularity, allowing us to increase our sales locations, as well as broaden the range of sodas we are able to offer.

Our proceeds have increased annually.

This is such an easy thing to do for koris! Please consider this fundraiser for the kori SSP at your facility!

JUST FOR FUN



Kori Bustard SSP

Chair Sara Hallager, Smithsonian National Zoological Park

Vice Chair Katie Vyas, Denver Zoo

Steering Committee:

Mike Mace, San Diego Zoo Safari Park

John Sills, Phoenix Zoo

Mike Taylor, Jacksonville Zoo