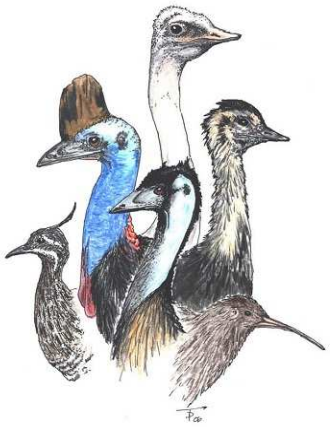
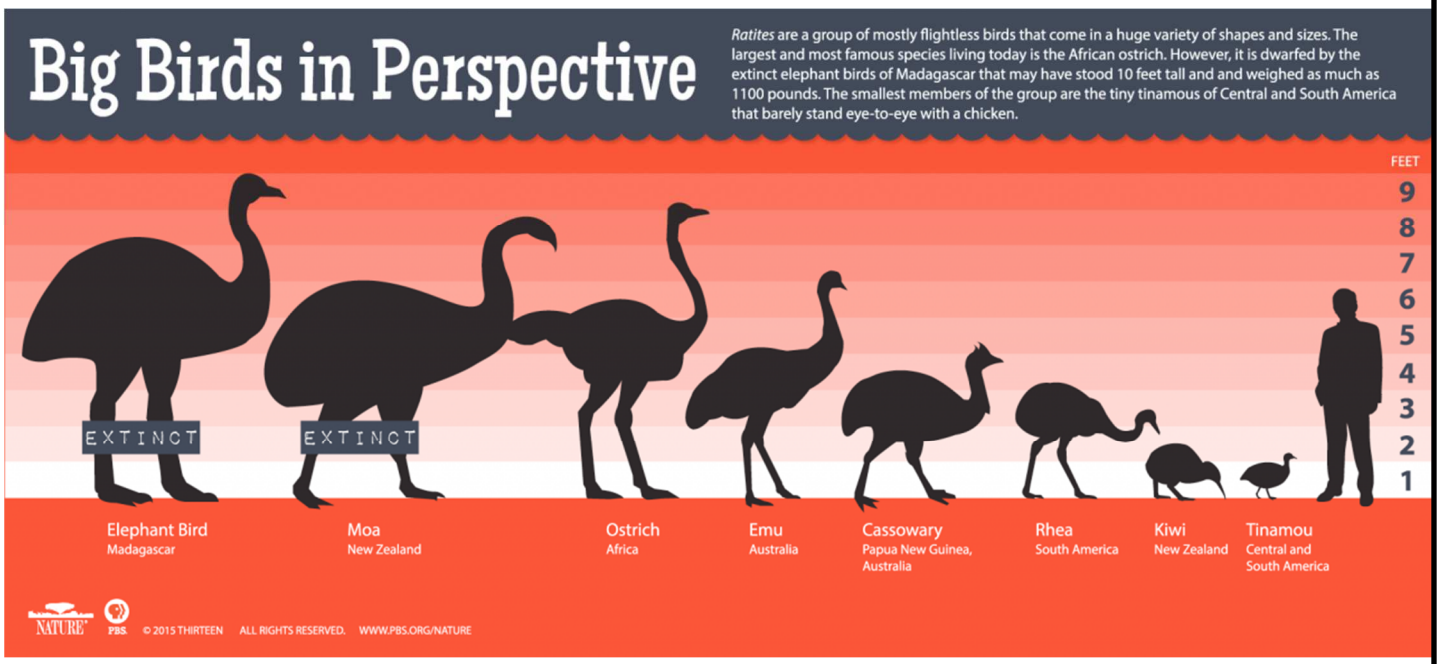
The Ratite Review



THE AZA STRUTHIONIFORMES TAG'S ANNUAL NEWSLETTER 2016



Richard Owen with the skeleton of a Moa

David Attenborough with an elephant bird egg

Out and About with Ostrich

By Sheri Horiszny, Santa Barbara Zoo

You know that thing that ostriches do when they are excited? When they run really fast, then suddenly stop and spin enthusiastically in a circle…?

That is how we at Care for Karamoja feel about the progress made in 2015!

Sheri Horiszny traveled back to Uganda in July and learned that the incubator and hatcher donated in 2013 are now: installed in their own room of the veterinary hospital at Uganda Wildlife Education Centre (UWEC) in Entebbe; supported by a generator and a solar powered battery back up; and credited with successfully incubating and hatching out two chickens! The chickens now live in the veterinary hospital compound with a rescued ostrich chick that tries very hard to fit in with its chicken friends/mentors. It was interesting to watch the four-month-old ostrich chick submit to "scoldings" from the rooster, and fun to imagine the shock the rooster may someday feel when the chick grows to over eight feet tall….

Incubator and hatcher installed and running at UWEC

Two chickens hatched from donated incubator, along with rescued ostrich chick;

Sheri with Dr. Andrew Seguya, Executive Director UWA, and Dr. James Musinguzi, Executive Director UWEC, and a signed copy of the MOU

The 2015 trip to Uganda was perfectly timed to sign the Memorandum of Understanding (MOU) that was in development throughout 2014 and early 2015. Sheri traveled with her partners from UWEC to Uganda Wildlife Authority (UWA) headquarters in Kampala for the signing meeting. We now have a formal agreement outlining the scope of activities aimed at improving the lives of endangered wildlife and over 785,000 food insecure people in the Karamoja region in the northeastern corner of Uganda. Care for Karamoja (C4K) is working with UWEC and UWA to facilitate a program designed to train local farmers to raise ostriches in an attempt to create additional revenue and protein sources, and thereby reduce poaching pressure on giraffes, ostriches and other wildlife in the area. One of the most interesting aspects of this project has become the attempt to solve the mystery of the subspecies of ostrich residing in the Karamoja region (the only part of Uganda where ostrich are found). It was previously assumed that the ostrich in this region were the common *S. c. maasiacus*, however the fact that their heads are bald indicates that they may be the rare *S. c. camelus*. UWEC collected feather, fecal and blood samples from a group of confiscated

Fresh wild ostrich fecal discovery

ostriches now living at UWEC for genetic testing, and the C4K/UWEC team was able to obtain a fecal sample from wild ostriches during their census work in Kidepo Valley National Park within the Karamoja region (the genetic samples were imported in October 2015 to Smithsonian Institution where they await analysis by Dr. Rob Fleisher). Stay tuned for the answer to this mystery!!!

The census team mentioned above was a subset of a giraffe census team working to conduct the first-ever photographic survey of giraffes in Kidepo Valley National Park. C4K and UWEC partnered with UWA and Giraffe Conservation Foundation to conduct a three-day, comprehensive survey of the giraffes within Kidepo. The team of three vehicles and 14 people generously added ostriches to their daily search.

~ On Day #1, the survey team heard about a sighting of a group of ten ostriches.

~ On Day #2, the survey team directly observed two ostrich groups of 7 and 21.

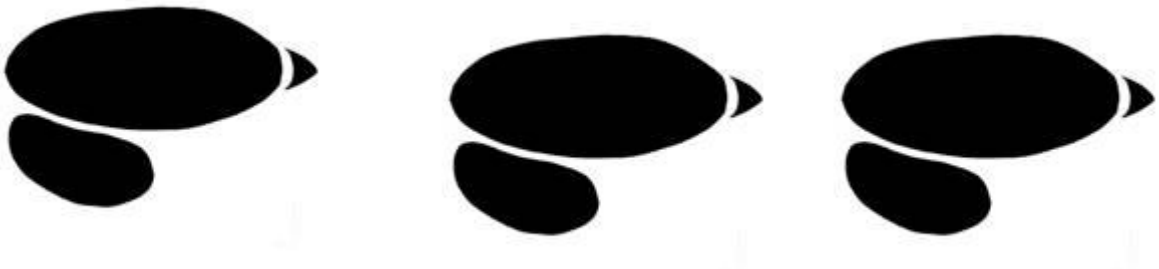
~ On Day #3 the team observed a group of 14 ostriches.

In a follow up drive on 26 July the team found two groups of 15 and 16, as well as the fresh fecal for sampling. An aerial survey conducted by UWA in 2014 reported 330 ostriches in the region. We plan to continue work to identify the subspecies and size of this ostrich population in 2016 and beyond.

You can watch a video about the Care for Karamoja project, and learn more at:

www.care4karamoja.org. The video appears in the "About" section. You can also follow us on Facebook at www.facebook.com/careforkaramoja, or contact Sheri Horiszny at shoriszny@sbzoo.org with questions.

Special thanks for ongoing support to: The Roosevelt Park Zoo, The Santa Barbara Zoo, The Zoological Society of San Diego, NABU, Six Flags Discovery Kingdom, Milwaukee Chapter AAZK, Dallas Chapter AAZK, Detroit AAZK Chapter.



Ostrich Recovery Project in Niger
Progress Report December 2015

Project goals & main achievements in 2015

With the exception of a few small savanna populations, the North African ostrich has completely disappeared from its previously vast Sahelo-Saharan range. SCF's North African Ostrich Recovery Project aims to provide the framework, resources and technical support to restore to the wild a highly-adapted desert race of ostrich in Niger. In 2007, the Sahara Conservation Fund (SCF), the AZA Ratite Taxon Advisory Group and a local Nigerien NGO, called CERNK, partnered on a groundbreaking effort to save the endangered North African ostrich and aid its recovery in Niger. By 2018 our goal is to have small numbers of ostrich returned safely to the wild.

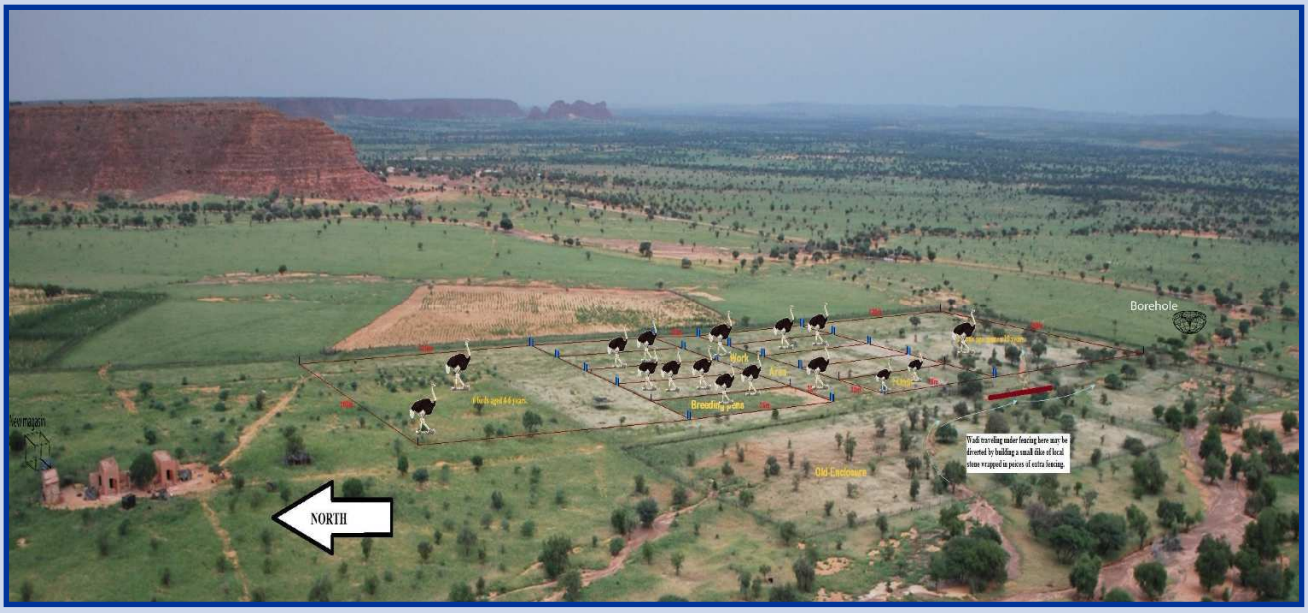
This year, project achievements included:

- Training in incubation and bird handling for the site manager in Germany at Weltvogelpark, Hannover Zoo and a private ostrich farm.
- Improved infrastructure for the ostrich breeding center by strengthening the perimeter fence and the drilling of a well.
- Improving handling and management of the captive ostrich by splitting the juveniles and sub-adults in different pens according to the recommendations of the project's US-based team of experts.
- Establishment of a partnership with the regional livestock department to monitor the health of the birds and the risks of infectious disease.

Reproduction

In November-December, the ostrich pair, Maria and Aoulaye, laid 9 eggs but one was broken and they started to incubate in late December. The other breeding pair, Aicha and Moustapha, laid 6 eggs but they did not incubate their eggs and so two were moved into the nest of Maria and Aoulaye to be incubated properly with their own.

At the end of the year, the breeding center in Kellé was holding 5 adults, including 2 breeding pairs, 4 sub-adults of nearly 2 years old, 5 juveniles aged 14 months old, and two aged 9 months old. The map below presents the layout of the breeding center with an overview of the pens and the infrastructures used by the local staff. The westernmost pen is still unoccupied and has the potential of holding more birds in the near future. In 2016, we hope to get more birds from our breeding pairs and from other breeding centers to increase the genetic diversity and the number of birds to be released.



Overview of the eastern pens and infrastructures of the breeding center

Ostrich handling and site management

As every year in the Sahel, after the wet season, grasslands dry out pretty quickly and the risk of fire increases with the first strong winds blowing from the Sahara. A simple bush fire lit intentionally by herders, as it can happen sometimes, would have a catastrophic impact on the breeding center and could wipe out many years of effort in less than an hour. It is, therefore, crucial to create firebreaks right after the wet season in October as has been done this year under the supervision of the site manager and the local forester.

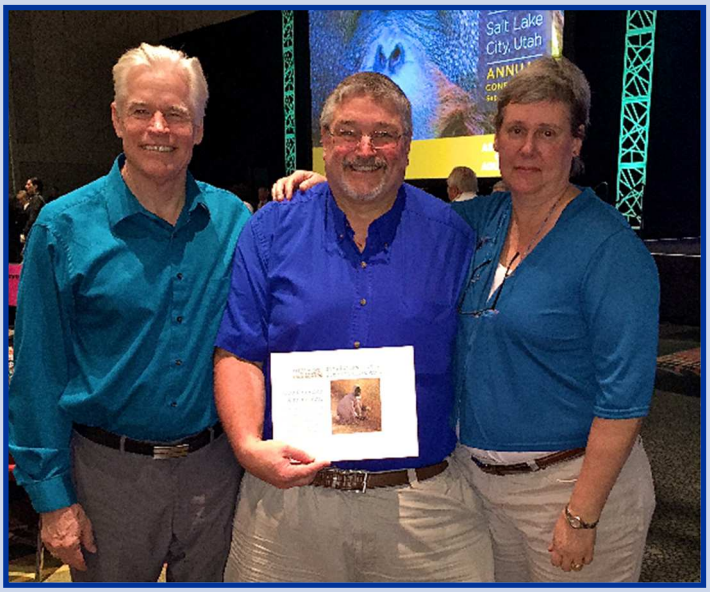
Construction work to stabilize the wadi bank

The well, which was initially hoped to be dug inside the breeding center, has finally been sunk outside the fence due to the lack of adequate water inside. The well and associated infrastructure will be secured by a barbed wire fence and dry hedge fences. Management of this new source of water will be facilitated through input from the village chief and elders.

At the beginning of the rainy season, construction work was carried out to stabilize and protect the wadi bank near the western enclosure, previously damaged by heavy rainfall and floodwaters last year.

US zoos honored for their loyal commitment

The ostrich recovery project would not exist without the ongoing support of many zoos and SCF would like to congratulate the 52 Association of Zoos and Aquarium (AZA) partner zoos for the 2015 AZA International Conservation Award in recognition of their collaborative efforts to give voice to the Sahara's wildlife; see the picture with Mike Mace (San Diego Zoo Global), Bill Houston (Saint Louis Zoo) and Sara Hallager (Smithsonian National Zoo) representatives of the 52 AZA zoos recognized with SCF.



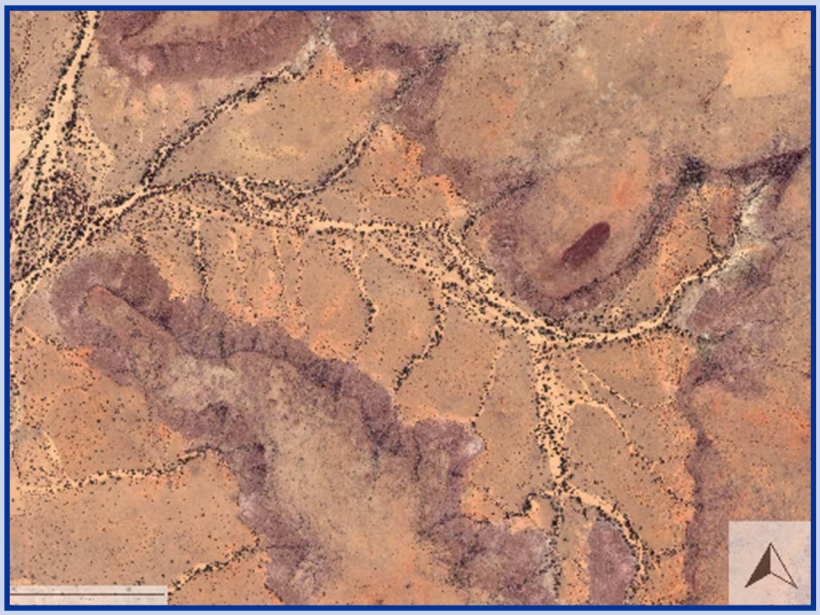
Mike Mace, Bill Houston & Sara Hallager posing with the certificate

The ostrich project staff is also very thankful for the expertise and advice brought by American experts from Saint Louis Zoo, San Diego Zoo Global, Smithsonian National Zoological Park, Disney's Animal Kingdom, and Tampa's Busch Gardens. The US expert team has played a critical role in improving the diet, infrastructure, veterinary care and handling in order to reach a high standard of professionalism and to increase the chances of success. Indeed, after many setbacks -- wild ostriches are not easy to raise in captivity -- the center is currently producing around 10 chicks a year with a target of 30-40 in the years to come.

Panoramic view of Tilala valley

Trial release site of Tilala

Working with a local NGO – CERNK -- from within the host community has vastly improved access to local leaders and decision-makers, facilitating the project's outreach and public awareness objectives. On this basis, the local community has already identified sites for the potential release of the ostrich. Amongst them, one site named Tilala, has already been identified by our local partner.



Satellite BingMaps© image overview of the Tilala pre-release site

The site is unique in the region because agriculture has been prohibited until now thanks to local initiatives. Livestock is permitted to cross the valley but not settle there. Tilala is a wide valley surrounded by rugged, rocky hills forming a natural barrier. The habitat seems to be perfectly suitable for ostriches for a period of adaptation to truly wild, free-ranging conditions.

Prior to the site's use, fencing will have to be erected to exclude livestock. Similarly, agreements with local herders, brokered by their traditional leaders, will be needed to avoid encroachment. Beforehand, a broad local awareness campaign will be carried out to gain the support of all the stakeholders in the region and avoid misunderstanding about the objective to reintroduce the biggest bird in the world back into the wild.

Main Challenges for the year ahead

To achieve the project's ambitious goals and by the end of 2018, release birds from captivity in Kellé breeding center back into the wild, we need to strengthen and improve several components of this multi-faceted program, including:

- the introduction of solar power to run an incubator and hatcher;
- further imports of birds from private owners in Niger and from Chad to increase the gene pool and number of breeding birds;
- the construction of a small building on site, where the project will have an office, a meeting room, storage rooms, and the incubator room.

Your generous support in helping us meet these goals is very much appreciated.

Help us reintroduce the North African Ostrich in Niger!

From 2013 to the present, this project has been made possible through the generous support of the following people and institutions: Saint Louis Zoo, Smithsonian National Zoological Park, Columbus Zoo & Aquarium, Dickerson Park Zoo, Kansas City AZK, Fort Wayne Children's Zoo, San Francisco Zoo, Omaha's Henry Doorly Zoo, Zoo New England, Disney's Animal Kingdom, North Carolina Zoological Park, San Diego Zoo Global, Toledo Zoo, West Texas AAZK, Milwaukee County Zoo, Zoo Miami, Busch Gardens Tampa, AZA's Ratite TAG, Happy Hollow Zoo, Zoo Atlanta, Woodland Park Zoo, Hogle Zoo, Tulsa Zoo, Safari Enterprises, Thuraya, Bill Houston, Sara Hallager, Peter Black, Tim Woodfine, Pierre Comizzoli, Roseline Beudels-Jamar, Thomas Rabeil, Steven Monfort, Karen Sausman, Mark Stanley Price, Larry and Tony Johnson.

Make a connection between your zoo ostrich and the conservation of the largest bird on the planet.

The AZA Struthioniformes TAG helped developed the **Adopt-an-Ostrich Program** to support the acquisition, care and feeding of pure-bred Saharan ostrich in Niger; to help maintain the ostrich facilities; and to improve capacity for ostrich management. With your help, we can get Saharan ostrich back on the road to recovery in Niger. **$500 will cover the care of one ostrich in Niger for a year.** Our goal is 100% participation by anyone interested in ostrich, at whatever level each can contribute. SCF will acknowledge all contributions. Please consider making a pledge today and add your voice to the growing chorus speaking for the conservation of the Sahara's Wildlife. Thanks in advance for your support!

Visit scf@saharaconservation.org to make a pledge!

SAHARA CONSERVATION FUND

Running with Rheas

Darwin's Rhea Conservation Program in Patagonia Park, 2014 - 2016

Cristián Saucedo G. & Paula Herrera G.
DVM, Wildlife Administration, Patagonia Park


Darwin's rhea with chicks

Conservación Patagónica (CP) has developed an initiative in order to ensure the long-term conservation of the Darwin's rhea (*Rhea pennata*) population of Patagonia Park, one of the last refuges of the species in Chilean Patagonia, South America. According to the International Union for the Conservation of Nature (IUCN), the species is listed as Near Threatened (NT) along its geographic distribution, with a declining population trend. The Chilean Wildlife Service (SAG) classifies it as Endangered (EN) within the Aysén District.


Camera trap monitoring in Pata

In Patagonia Park, the Darwin's rhea has a population of less than 25 individuals, requiring urgent action for its protection. This population has been isolated for over a century due to fences and dogs affiliated with local livestock management. The species has been victim to poaching for its meat and feathers, attacks by dogs, and nest and egg destruction by both people and dogs.

In 2014, CP established a permanent park warden who is in charge of wildlife protection with a focus on rhea monitoring. Records of rhea sightings are taken from the warden's patrols on foot as well as with the use of camera traps. As a result of these patrols, a number of natural predators have been identified in the area such as culpeo foxes, pumas, grisons, armadillos, and pampas cats. The warden also notes nests that have been destroyed by humans or dogs, which have a far more detrimental effect on rhea breeding and survival rates. The gradual loss of rhea chicks in the wild during the first months of life is a serious detriment to the growth of the area's wild population.

Objectives

The general objective of this program is to increase the Darwin's rhea population in the Patagonia Park area, and to recover this large iconic species of the Patagonian steppe.

Specific program objectives:

1. To monitor and track closely the wild rhea population (individuals, nests, and trends).
2. To identify threats and other limiting factors for the species' survival in the area.
3. To mark presence and to develop partnerships and trust with neighbors (Chilean and Argentinean police, Army Ranch and Argentinean gauchos from nearby livestock ranches).
4. To develop a breeding center for the species in order to augment the native rhea population and to establish new groups of the species in the park (reintroduction).

Breeding Center: During 2013 the University of Chile conducted a study to determine the potential habitat available to Darwin's rheas in Patagonia Park, and concluded that there are large areas with suitable habitat. The breeding center was considered as an alternative for conservation of the species of the area, but at the time the access to adult breeders in captivity was unfeasible. t the end of 2014, an opportunity appeared. Two orphaned rhea chicks (representing the 10% of the total wild population of the Park) were rescued by the Chilean border police, and with the wildlife authorities approval, CP took on the challenge of their care and recovery. The Darwin's Rhea Breeding Center was launched, marking the first of its kind in the district.


Initial facilities and founding birds

Darwin's rhea chicks travel to the facility

The plan for the center is to augment the current population with young rheas from other populations within Patagonia, which will be cared for and bred with the objective of increasing the park's population. Due to the long isolation period of the park's current population, the contribution of a new genetic pool will be very beneficial.

PATAGONIA NATIONAL PARK - XI REGION, CHILE

In the beginning of 2015, the first two enclosures were built to accommodate the orphans and the first group of chicks (ten chicks in total) from an external population, which were purchased from a commercial breeder, located 1,000 km north. In March 2015, the three-month-old rhea chicks were successfully transported by airplane and arrived safely at the Park in excellent condition. The facilities are located in a very remote and isolated mountain area of the Patagonia Park, close to the border area with Argentina. The project has received the technical expertise and support of Argentinean expert Daniel Sarasqueta, the Chilean Ornithologists Union, and the University of Chile. The survival and success of the rhea management during the first year was good considering our limited experience with the species. In the first year, two birds were lost due to traumatic events running into the fence during night, and a third one during the management of an overgrown beak, apparently due to stress during handling. When the older birds reached one year, one of the males built a nest and incubated 4 eggs over 40 days, but the eggs were infertile. This is a promising sign for the next breeding season in 2017. At the end of 2015, four additional chicks from the wild local population were rescued by the police border patrol and were incorporated into the breeding center. Today the center has a total of thirteen individuals, nine are older than a year old and four are three months old. Most previous experiences with Darwin's rhea management have been restricted to confined birds bred for economic purposes which, as a business has failed. We have found just one other example of captive breeding for release, located in the Rio Negro Province, Argentina, where the reintroduction of seven Darwin's rheas was apparently successful. This program is the first of its kind in Chile to augment native populations of Darwin's rhea with captive individuals in order to grow the population and reintroduce a species into a protected area.

Left: Darwin's rhea in communal pen

Below: The enlarged pen

This initiative is open to receiving support and advice of other organizations and individuals who want to join in the challenge of recovering Darwin's rhea population in Patagoina Park.

Camera trap monitoring

Catching Up with Cassowary

Building Cassowary Education at the Birmingham Zoo by Carrie Brooks, On-site Programs Coordinator

Over the years I have discovered that zoo visitors are fascinated with the cassowary, although very few know what it is, which leads to great opportunities for conservation education. By educating visitors about this beautiful, yet slightly bizarre animal, they are often seeing for the first time we can build connections not only between them and the cassowary, but also to native birds in our own backyards.

To further the Birmingham Zoo's conservation education efforts I received a zoo grant to travel to eastern Australia to learn about Rainforest Rescue's Save the Cassowary Campaign and bring cassowary conservation education to the Zoo. In March 2015 I visited Taronga Zoo, WILD LIFE Sydney Zoo, Currumbin Wildlife Sanctuary, Australia Zoo and Cairns Tropical Zoo to learn how each organization is involved with the Save the Cassowary Campaign and cassowary education. I met many dedicated educators, keepers and other staff who were excited to share their projects and ideas. Throughout my visit I discovered a genuine passion and care for the bird from employees and visitors alike. Institutions held exciting keeper talks, feeding demos and even opportunities for visitors to feed. I also visited the Rainforest Rescue headquarters in Mullumbimby to begin to formulate a plan for bringing the Save the Cassowary Campaign back to the Birmingham Zoo and possibly even other American zoos.

In Mission Beach I was even fortunate to see a wild cassowary one morning as I traveled to Garners Beach Cassowary Rehabilitation Centre to meet three orphaned chicks. I was able to watch the chicks slowly poke around their pen, popping a few cubes of fruit into their beaks before laying down for a mid-morning nap. It was amazing to realize that those adorable little chicks would become large cassowaries roaming the forests of Queensland. In Mission Beach I was also able to attend a meeting of the group C4 or Community for Coastal and Cassowary Conservation. At this particular meeting a representative of the non-profit organization Terrain was working with the group to identify possible solutions to the main threats to cassowaries in the area: dog attacks and vehicle strikes. The group spoke passionately about "their" cassowaries, sharing the names and statuses as well as mourning the losses that had occurred. It wasn't until that meeting that I truly realized the severity of the dog problem as the members told stories of the culture of using dogs to hunt feral pigs and the local dog attacks on children and cassowaries. It was inspiring to meet so many caring people who were working together to make a difference. In addition to Mission Beach, I was able to visit Cape Tribulation and the Daintree World Heritage Rainforest. Although I didn't see any more wild cassowaries, their forests were indescribably beautiful and full of life. Under the threat of Cyclone Nathan, I was able to see a few of the Rainforest Rescue properties which had been replanted and learned how lots are assessed and chosen for purchase. Unfortunately I had to cut my rainforest visit short but I learned a great deal in the few days I was able to stay. The trip was incredible and I returned home with many memories, photos, ideas, new contacts, a greater knowledge of cassowaries and an even stronger desire to develop programs to help connect visitors with such an amazing animal.

Upon return to the Birmingham Zoo, I began to create new cassowary education experiences. During the busy spring season I spent time each day at the cassowary exhibit with a few biofacts, informally educating zoo visitors. This allowed me to bring greater attention to the cassowary, which is somewhat secluded, and introduce visitors to this fascinating bird. It also gave me the opportunity to pass out cards to adults with cassowary facts and Save the Cassowary information. It

was fun and the visitor response was outstanding. I got to know Emil, our cassowary, pretty well too. We even featured him during AZA's S.A.F.E. Day on May 15th with more extensive interpretation and additional graphics about conservation and my grant project.

In the summer we held a two-day Cassowary Days event which included crafts, information and keeper feeding demonstrations and chats. We had great plans for a cassowary/keeper eating contest like Houston Zoo held several years ago but discovered that our cassowary is a very picky eater and likes his food cut into small pieces, which eliminated the point of using it to show how cassowaries eat. We were also able to collaborate with the Birmingham Botanical Gardens who brought resources to educate about tropical fruits and the role of the cassowary as the "rainforest gardener." I was able to use the opportunity to educate visitors about Rainforest Rescue, how individuals can help support it and even how to help native birds in Alabama.

For 2016, I am looking forward to continued informal interpretation, an even bigger Cassowary Day and perhaps some tie-ins with our Dino Discovery exhibit this spring. (All photos by C. Brooks)

Cassowary – Enriching one of the most dangerous ratites in the world

by Dana Urbanski, North Carolina Zoo, Struthioniformes TAG Enrichment Coordinator

Cassowary are native to the tropical forests of New Guinea, nearby islands and Northeastern Australia. The most common species in captivity is the Southern Cassowary or Double-wattled cassowary. The Cassowary is the third tallest and second heaviest living bird in the world. An adult can weigh up to 130 pounds, females are bigger and more brightly colored. They can stand close to six feet tall and run 30 mph. These birds are usually shy but when provoked they are capable of inflicting serious injuries to people and dogs. They have three toes on each foot with very sharp claws. The second toe (medial) has a dagger like claw which is about 5 inches long. They are mainly frugivorous but also enjoy plant shoots, grass seeds, fungi, small vertebrates and invertebrates.

Cassowary have several interesting adaptations that can be inspirational to caregivers when thinking about enrichment for these birds. They are good swimmers and enjoy water; provide pools for bathing, sprinkler systems or mud wallows. They have powerful legs and can jump almost 5 feet; hang enrichment from exhibit trees, offer various types of browse or put large deadfall in their exhibit. Their unique casque helps them push through dense vegetation or could be used as a tool to forage for food; provide a thick brush area or hide food in different forms of substrate.

Training is also an effective form of enrichment as well as a necessary tool in order to provide medical attention to these large powerful birds. Many institutions are fabricating "chutes" for their birds and have seen positive results. Other institutions are using the exhibit or back area fencing as a protective barrier when working with cassowary. Several medical husbandry behaviors such as scale training, hand injection, ultra sound and blood collection can be accomplished voluntarily when combining safe practices with novel enriching food and a desire to work with these magnificent birds.

ZAA (Zoo and Aquarium Association Australasia) **Update**

By James Biggs, Cairn's Tropical Zoo, Palm Grove, Queensland

Garner's Beach Cassowary Rehabilitation Facility

Photo: Emily Judson.

The Garner's Beach Facility receives and rehabilitates the majority of sick, injured or orphaned wild Southern Cassowaries in the Wet Tropics Region of Australia. Although Cassowary rehabilitation is a resource intensive exercise, it has been identified as a key objective in the Cassowary Recovery Plan (Latch 2007) to contribute to safeguarding the future of Australia's Endangered Cassowaries.

Historically, the facility was operated by the Department of Environment and Heritage Protection (EHP) and relied on "Recovery Funding" supplied by the government after natural disaster events like cyclones. Fortunately the region has not seen a significant cyclone make landfall since tropical Cyclone Yasi in 2011, however this has also meant that the facility has received no additional funding since 2011. Last year, recovery funding expired and a partnership deal was sought between EHP and Rainforest Rescue (RR) whereby RR would provide funding from the Save the Cassowary Campaign to operate the facility and management would be continued by EHP. While this arrangement provided valuable care for a number of birds, the low success of the campaign led to the termination of the partnership and the announcement by EHP that the facility would close. Outrage by local community groups swiftly gained broad media and political interest and action from Queensland's Premier, Annastacia Palaszczuk facilitated a $80,000 injection of interim funding from the Queensland Government. Rainforest Rescue agreed to continue operating the facility while EHP sought expressions of interest to develop long-term management arrangements with external organizations. Five expressions of interest were received and are currently undergoing assessment. The facility remains open to sick, injured and orphaned wild cassowaries.

Cassowary Population Estimate, Wet Tropics Australia

The Wet Tropics is home to about 4,400 cassowaries, with a minimum of five percent being the year's youngsters. The figure is based on several years of monitoring and DNA analysis by Dr David Westcott and his team of researchers at CSIRO under the National Environmental Research Program. Their Wet Tropics surveys covered 1886 kilometres and 156 transects. They recorded 1444 cassowary signs (dung, feathers, tracks and sightings). They also did 170 surveys of focus sites and recorded 296 signs of cassowaries. The DNA of 435 sub-samples was analysed from 134 different dung samples.

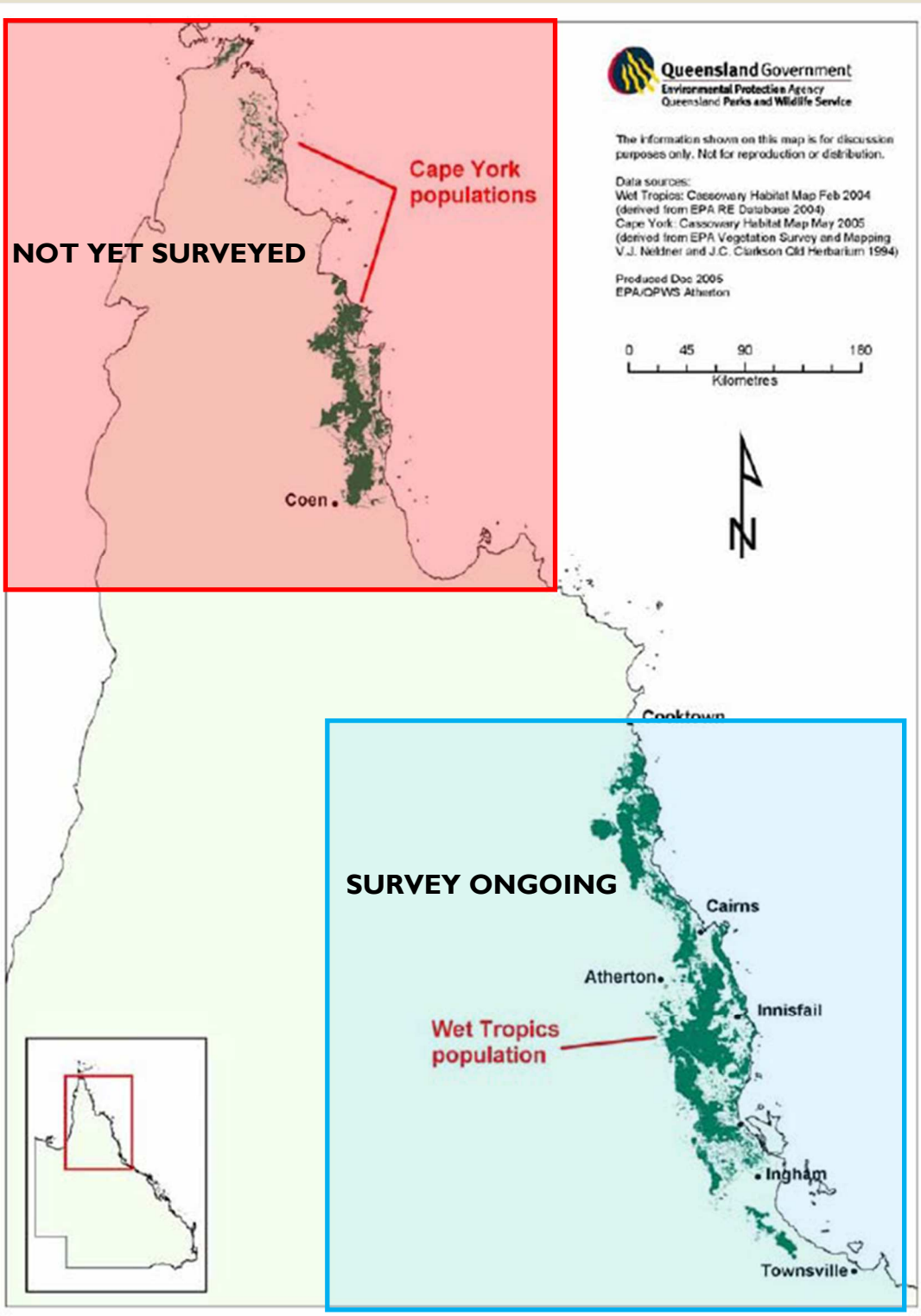


Figure 1: Distribution of cassowary habitat in Australia

What do the population numbers mean for cassowary conservation?

✦ The population estimate is consistent with the upper range of previous estimates undertaken 20 years ago.

✦ While these cassowary population numbers are larger than have been often quoted, they are still small enough to place the cassowary at risk from chance events such as cyclones, genetic effects, and increasingly fragmented habitat.

✦ The conservation status of the cassowary remains endangered and populations are likely to decrease if habitat fragmentation worsens and cyclones become more intense or more frequent with climate change.

✦ Future investment in cassowary management should focus on cassowary habitat protection and connectivity.

✦ A regular cassowary monitoring program (for local focus sites and the Wet Tropics region) is essential to track population trends and life histories.

Cassowary monitoring with Traditional Owners in Cape York should be established to survey the increasingly fragmented populations in areas such as the McIlwraith Range. Visit the NERP website for more information.

Reference: Westcott, D., Metcalfe, S., Jones, D., Bradford, M., McKeown, A., Ford, A. (2014) Estimation of the population size and distribution of the southern cassowary, *Casuarius casuarius*, in the Wet Tropics Region of Australia Project © CSIRO

Significant Cassowary Incidents Mapping and Database Tool

Earlier in 2014, I was charged with creating a tool for the Cassowary Recovery Team to advance our knowledge of the relative extent and location of significant cassowary incidents including but not limited to vehicle strike, dog attack and disease. The Significant Cassowary Incidents Mapping and Database tool (SCIM) was developed by myself, Dr Irene Gorman (Cairns Tropical Zoo), Patrick Gorman, Tony O'Malley and Sharlene Blakeney (Terrain Natural Resource Management) using a compilation of historical cassowary incidents data recorded by government departments and vet practices in the Wet Tropics region. The SCIM consolidates spatial, temporal and other data relating to significant cassowary incidents, and presents the data in an interactive system which allows users to interrogate specific incident-related variables either together or in isolation. Our research clearly identifies vehicle strike as the most significant recorded current cause of cassowary mortality in the Wet Tropics with a number of hotspots pinpointed in the Mission Beach area. The SCIM has already been useful for prompting and motivating authorities and key stakeholders to participate in discussions to identify and design effective solutions based on facts. Various questions that were asked of the data were used to inform discussions at a "Cassowary Roadkill Solutions Workshop" hosted by Terrain Natural Resource Management. The workshop was well attended by representatives from the community, state and federal science and environment departments, local governments, the tourism industry, universities and the zoo industry. The three key outcomes from the workshop included a plan to develop a significant education program; a plan to bolster research around cassowary sightings and incidents, and to address the key hotspots of vehicle-related cassowary mortality. Following this workshop, an onsite meeting was held at the key hotspot area in Carmoo (Mission Beach Area) where more than 20 birds have been injured or killed. Representatives from the State Department of Transport and Main Roads made commitments to work with the community to create a road treatment plan in an effort to reduce cassowary mortality in the area. Site monitoring will begin in March 2016. Ongoing development of the SCIM and more consistent data recording will allow us to ask very specific questions over time.

Cassowaries and Camera Traps

by Wren. R. McLean (originally written as a blog piece for the Save the Cassowary Campaign)
www.savethecassowary.org.au

Photos © Wren McLean

A cassowary research project was conducted in the Daintree throughout 2014-15 by ex Rainforest Rescue employee and on-going giver Wren McLean.

Wren has a long history with the Daintree and spent her 21st birthday (some 20 years previous) exploring the region on a gearless second hand bike riding up and down steep washed out 4wd tracks and through flooded rivers during the wet season of 1995, sleeping under only a tarp. Surprisingly she did not spot any cassowaries during this adventure but she is sure, after more recent experiences that they would have spotted her. Now a post-grad wildlife researcher with Southern Cross University she has had enough one-on-one encounters with these formidable birds to understand that they have a sharp awareness of what's what and who's where in their dense rainforest territories which are estimated to be approximately 80ha in size. Wren established 31 study sites from the Daintree river in the south to Melissa Creek in the north of the Daintree which included four Rainforest Rescue Nature Refuges purchased and protected forever as part of the Daintree Buyback program.

Each site was surveyed 4 times for any sign of cassowaries (sighting, vocalisation, scat or footprint) with their fruity dung (or scats) being collected for dietary analysis. An experimental survey technique was also trialed whereby fake fruits were placed in front of camera traps at half of the sites and not at the other half. Rainforest Rescue loaned camera traps for this research, which were an invaluable tool which contributed to the first strategic use of remote camera traps to survey cassowaries and the first use of visual lures (representing large red and blue fruits) used in conjunction with camera traps for any wildlife species.

Camera trap image of a cassowary attracted to red lures.

The 'camera trap visual lure technique' was shown to significantly was reduce the amount of time required to get the first photographs of cassowaries at a site from an average 11.4 days without the use of lures to 6.5 days when using lures. This allows for considerable savings in time and costs of surveying this species that is known as notoriously difficult to study due to them being cryptic (solitary, shy and silent) and inhabiting remote dense terrain. Cameras with lures were also found to detect more than twice as many cassowaries as those without. As the cameras were randomly allocated across all sites this may suggest that cameras without lures failed to detect around half the cassowaries potentially present at those sites. Cassowaries were also twice as likely to stop in front of cameras with lures and spent a significantly longer time in front of them which provided a significantly more images of all three angles of the birds both of these factors increased the ability to see unique features that allow for individual identification. All camera traps combined provided a pool of 466 visual records from which we were able to

identify 45 individual cassowaries of which 64% were adults, 18% sub-adults and 18% chicks. Cameras provided other useful

information on cassowary predators (domestic, pig-hunting and wild dogs), feral pigs and photos of three Bennetts tree kangaroos at two different locations.
The Rainforest Recuse reserves surveyed were;

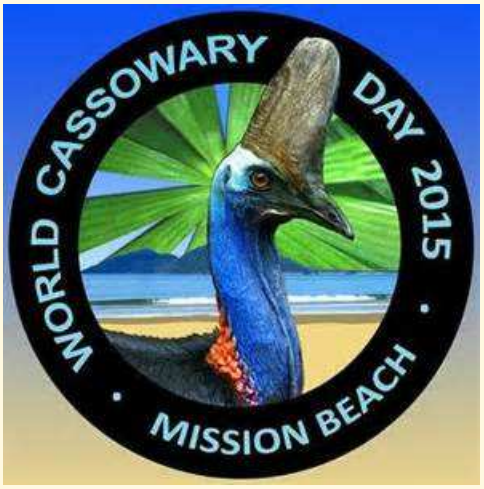

Baralba Corridor Nature Reserve

- Rainforest Rescue Nature Reserve at Forest Creek where an adult and two stripy chicks were videoed on one occasion and several scats were found.
- Milky Pine Wildlife Refuge where two courting adults were videoed on numerous occasions along with one independent sub-adult. Scats, footprints and one sighting of this sub-adult were recorded here also.
- Baralba Corridor Nature Refuge is prime cassowary habitat with 2 single adults and one male with accompanying brown chick photographed. Numerous sightings and vocalisations were recorded along with many scats.
- Kulki anga Nature Reserve, only one scat was found here on the edge of the reserve but the property protects important cassowary habitat that is undoubtedly used throughout the year but a number of resident birds in the area.

Valuable information about the diversity and pattern of habitat use can be derived from dietary analysis; however, no such studies have been undertaken on the Daintree coast. To date, the Daintree cassowaries are mentioned in one published work (Webber and Woodrow, 2004) for their role in dispersing the seed of a rare rainforest tree *Ryparosa sp*. The lean season diet was of particular interest to Wren as this often corresponds with the juvenile dispersal period and adds the additional risk of starvation to dispersing chicks. Wren considered the lean season to be from April- July but did not get as much lean season fieldwork opportunity as hoped due the arrival of tropical cyclone Ita which produced 764mm of rain over her first 17 days fieldwork. Many attempts to to establish forest transects during this time were fraught by impenetrable thickets of *calamus spp,* cyclone damaged vegetation or impassable flooded waterways. A follow up study lean season diet is recommended to add to our knowledge of lean season cassowary food species for habitat restoration and enrichment projects. The dietary analysis and fruiting study compared fleshy rainforest fruits found on transects both in the scat and on the ground. 71 scats were analysed and contained 28 identified and 11 unidentified species and two exotic palms. On the forest floor, 201 occurrences of 39 species were encountered that represented 23 plant families. The estimated biomass of 18 identified fruits found common to the scat and the ground were compared between sites, seasons and species as well as by family, colour, weight range and fruiting pattern. The results suggest a preference for some species and an avoidance of other species. Five species; *Syzygium Kuranda, Syzygium graveolens, Cerbera floribunda, Elaeocarpus augustifolius*, *Beilschmiedia castrisinensis* made up 87.2% of the total estimated biomass of fruits eaten. *Syzygium kuranda* was the most readily utilized species over both seasons. Whilst none was found on the forest floor during the abundant season a 3.4 fold increase of this species is seen in the scat between the lean and abundant season suggesting abundant season selective foraging. The only species suggesting preferential foraging during the lean season is *Cerbera floribunda,* whereby 56.5% of the total biomass of this species was consumed during this time. These 5 species, along with *Syzygium hemilampra,* are all substantial contributors to the lean season diet and should be given special attention by seed collectors, native nurseries and rainforest regenerators.

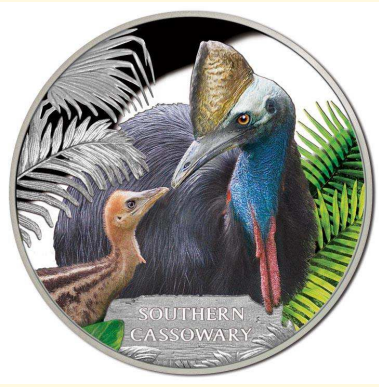

Baralba Corridor Nature Reserve

World Cassowary Day



September 26th 2015 marked World Cassowary Day.

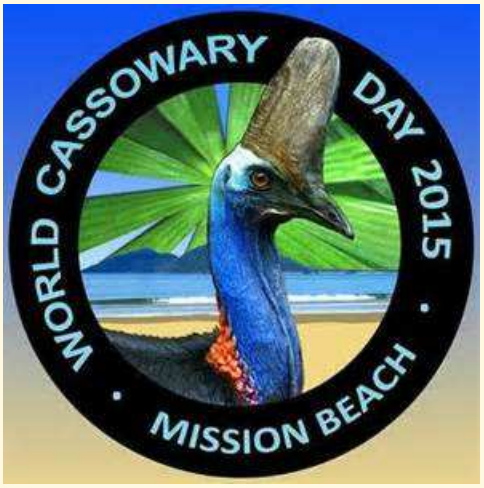
The aim was to raise awareness of this iconic Australian bird to the entire world.



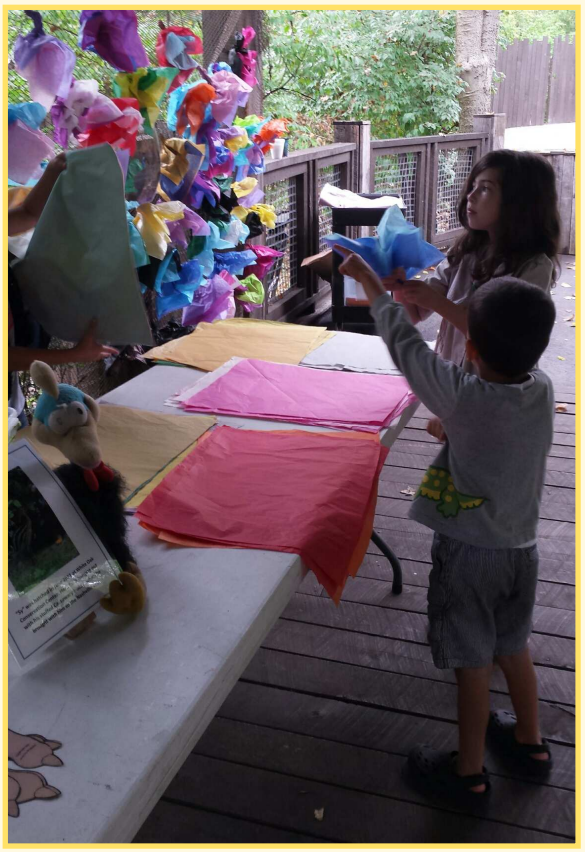
Zoos around the world celebrated the cassowary on Sept 26th. Featured here are photos from:

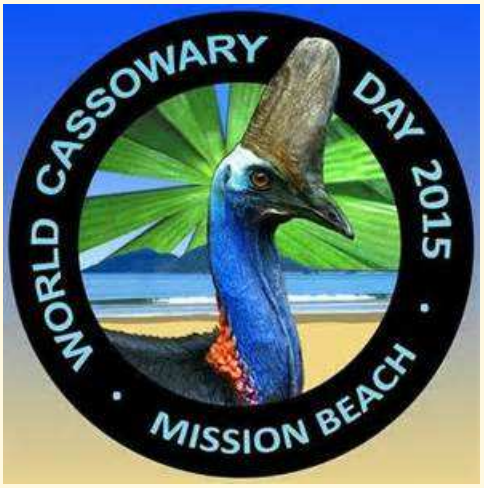
Vogelpark Avifauna, Nashville Zoo, Jacksonville Zoo, Smithsonian National Zoological Park, Virginia Zoo and Birmingham Zoo

Vogelpark Avifauna, Alphen aan den Rijn, The Netherlands



Nashville Zoo, Nashville TN, USA





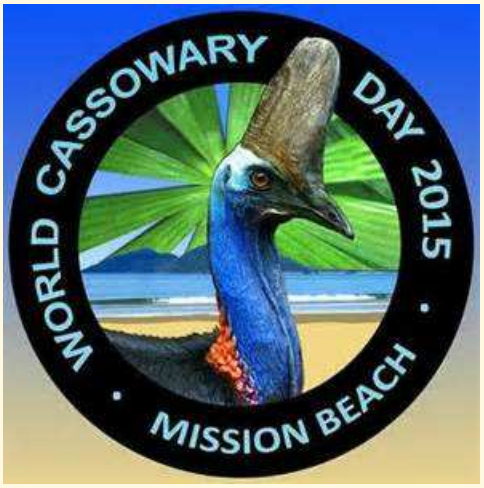
Smithsonian National Zoological Park,
Washington DC, USA

Smithsonian
National Zoological Park

Cassowary craft at Virginia Zoo. Photo by Alexandra Zelazo-Kessler, Virginia Zoo

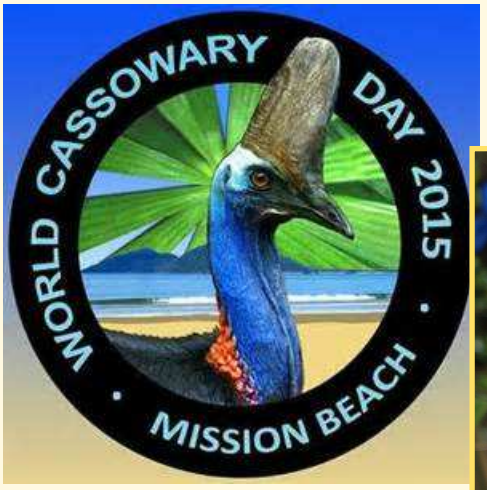
Virginia Zoo, Norfolk, VA, USA

VIRGINIA ZOO



JACKSONVILLE ZOO AND GARDENS

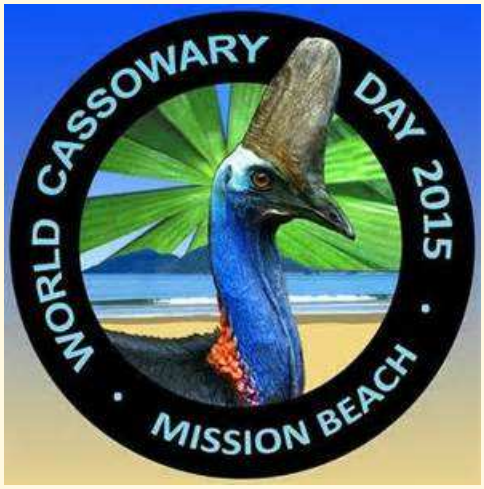
Jacksonville Zoo and Gardens, Jacksonville, FL, USA



Birmingham Zoo, Birmingham AL, USA

KEEP CALM AND LOVE A CASSOWARY

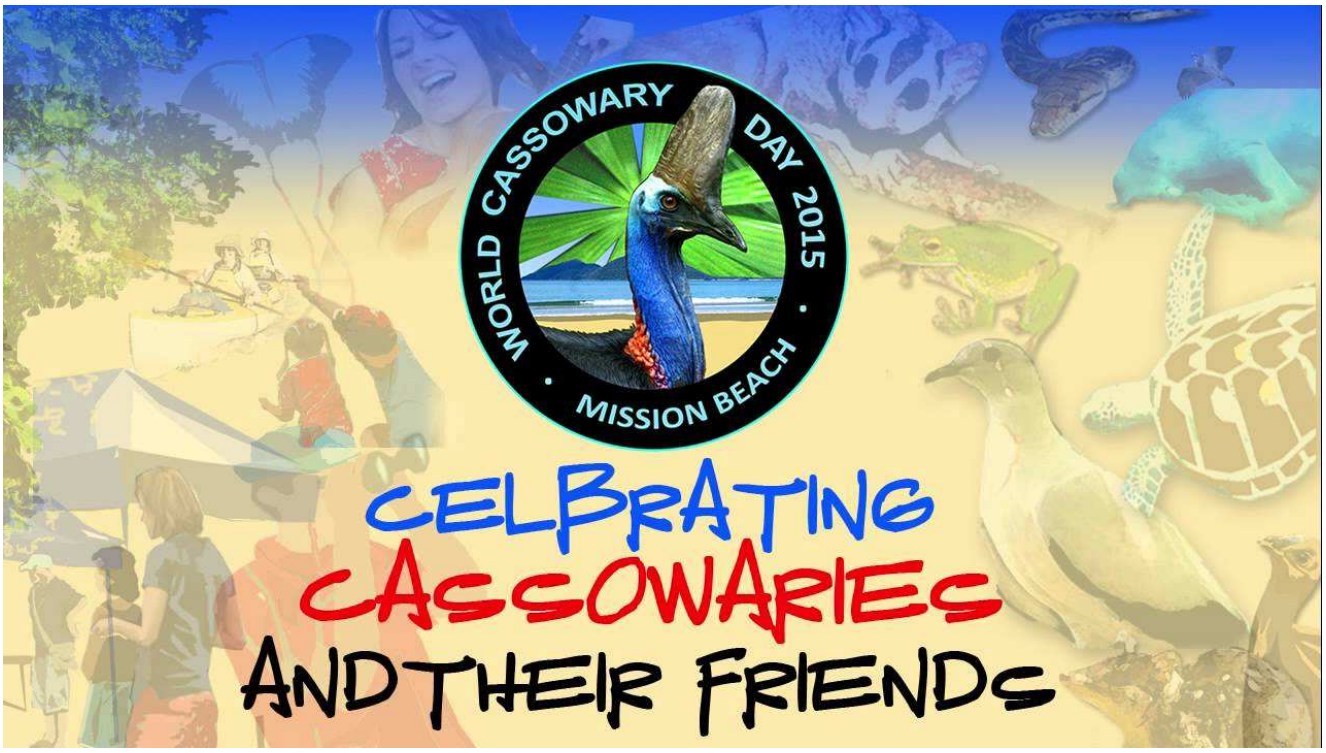
World Cassowary Day 2015 , Mission Beach, Australia



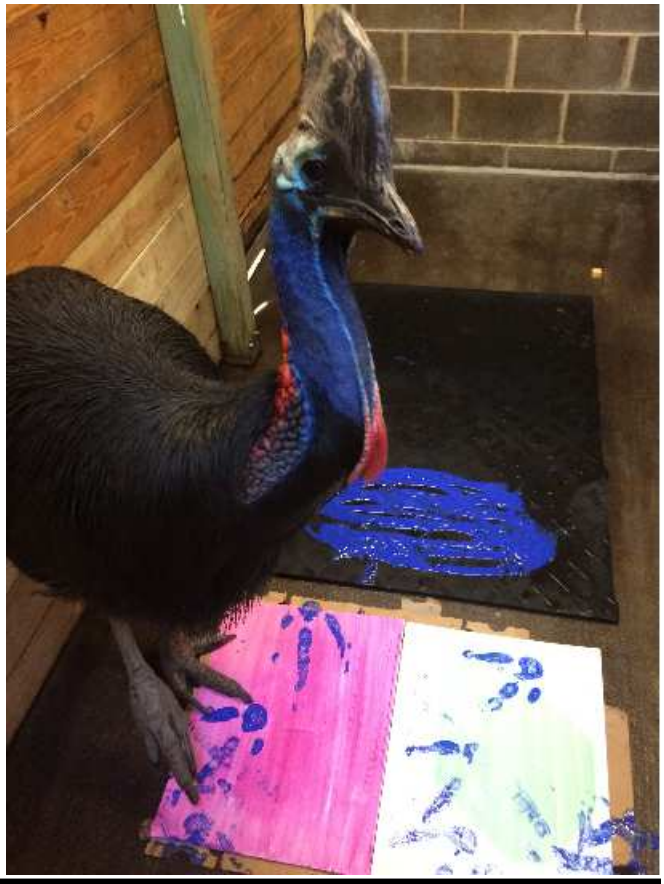
World Cassowary Day (WCD) was a great success in Mission Beach this year with close to 1500 visitors attending despite the tropical downpour in the earlier parts of the day. Guests of note included Bob Irwin and Threatened Species Commissioner Gregory Andrews who both spoke of the importance of the Cassowary to the health of the Wet Tropics.

Gregory and James Biggs also spent some time identifying cassowary vehicle strike hotspots to highlight the issue to interested guests.

In 2016, the WCD Steering Committee will seek international partner organizations to support efforts here in Australia by organizing and hosting events in their areas.



Sydney the Cassowary painting at Blank Park Zoo, Des Moines, IA. Photo by Megan Stegmeir



Cecil's Corner

Last year we saw Cecil turn the big 3-5! Despite his old age, he still has the hormones of a young bird. We have found over the years that Cecil sometimes prefers to incubate his enrichment items. Whether it be a large pumpkin or a bucket-shaped fruit-sicle, we will often find him attempting to hatch it as opposed to using his enrichment for its intended purpose. One day we offered him a medium sized mulch bucket with a sturdy rim to see if he would show any interest. Somehow the bucket tipped over on its side and he became intrigued by the novel orientation of his new item. Later in the afternoon, to our surprise, Cecil was found attempting to copulate with the bucket! From that day on, it has been lovingly referred to as "Cecil's hump bucket." Now, on special occasions we allow him to have the bucket. We've tried to catch him in the act on one of these occasions, but as it turns out, Cecil is pretty shy when it comes to these matters!

Emu Encounters

Trials and Tribulations of Moving a Pair of Emu by Carolyn Atherton, Curator of Birds, Audubon Zoo

Audubon Zoo recently remodeled our Emu exhibit. We have one single male, Elvis, and since moving him back to his new exhibit, we decided he needed some company. Fortunately, Alexandria Zoo was looking to place a pair of emu. Since Alexandria is only 3.5-4 hours away from New Orleans, we decided that transporting them overland would probably be fairly easy. This is that story of how we did it (and how wrong we were.)

Once we determined we would be transporting them overland, I looked for information on how people move emu around. The only article I could find was of one man's adventure stuffing an emu into the back of a station wagon. I figured there was a better way. We have a regular horse trailer. It is simple, and big enough for 4 horses, but there is only one divider door, for two horses in front and two in the back. I was concerned that this might be too much room for the emu. We had our carpentry section build a divider. It was very simple, a 4' X 8' sheet of ¾" plywood on its' side framed and screwed into the floor. Some 2X4 verticals made it stable and secure. We then covered the wood with blankets (in case the birds paced) and covered the window slats on the side of the trailer as best we could. I didn't feel comfortable with emu being able to stick their heads out the windows. It seemed like a good way to end up with a headless emu. The end result looked like this:

I enlisted the help of one of our hoofstock keepers to go with me (who better to drive a hoofstock trailer?) and we left for Alexandria in the wee hours of the morning. We arrived in good time and met up with Lisa Laskoski and her crew. Our truck with the trailer wouldn't fit in their exhibit very well, so we attached the trailer to a skid-steer and got it as close as we could. It ended up about 10 feet from the gate, with the exhibit doors and trailer doors open. A couple people with bully boards could help make a corridor right up to the trailer. Lisa and I consulted on the best way to load the birds. I told her our preferred method for moving our bird, Elvis, was to "frog-walk" him. I would get behind him and wrap my arms around his body and half crouch over him. In this fashion I could get him pointed and moving in the right direction and keep him from jumping around. It worked great with Elvis. Lisa agreed that we should try this method. So Lisa, one of her keepers, my hoofstock keeper and I went in with the pair of emu. We approached the female because I thought she might be easier. Long ago, a supervisor of mine helpfully explained to me that "ratites have two brain cells, and only one of them fires." (Hi Steve Sarro!) I went up behind this bird, got her a little cornered and wrapped my arms around her and attempted to frog-walk her. She hadn't heard my story on what an easy method this was to move, and she didn't want to cooperate. She started alternately bouncing, and collapsing on the ground and refusing to move. She would turn and stare at me with that one brain cell blank stare. I got her close to the gate, but she collapsed to the ground at the threshold and refused to budge. While I stood over her considering how to move her, she suddenly crab walked backwards between my legs, leaped up and took off, and I swear I heard her say "FREEDOM!" as she ran back to her exhibit. (I was wondering if she might have been related to William Wallace, either that or she had seen the movie Braveheart.)

Ok, plan B. We approached her again and I got ahold of her. We quickly slid a bright yellow sock over her head to hood her, thinking that it might calm her. Nope. She started bouncing more wildly than ever, crashing into my chest and knocking the wind out of me. At one point her head collided with my chin and there was an audible CRACK as my teeth slammed together. I let go. She ran off with the new fashion piece still over her head. "FREEDOM!!" At this point I was willing to try the male for something different. Instead of trying to frog walk him forcefully, we tried to make him go along the fence line to the open gate that lead up to the trailer. It worked fairly well, he ran along the fence and got to the open gate. I pressed against him to turn him to the open gate—and he hit "the invisible wall". He froze and refused to step through the open gate like the ground on the other side was molten lava. He went down on the ground. I tried lifting

him, rocking him back and forth, but nothing was going to make him walk over that invisible line. So finally, I whipped out yellow sock number two. Magically, he relaxed! I was able to get him up and walked him the short distance to the trailer. He sensed the edge of the trailer and hesitated. After a moment he jumped up and I pushed him into the trailer in mid-air. He stuck the landing like a pro and I quickly pushed him into the stall. I yanked the sock off his head and he stood quietly in the trailer. One down!

We went back into the exhibit to check on the female. She was walking along the back fence muttering "freedom" quietly and staring at us. She had worked the yellow sock down on her neck where it looked like a bright fashion statement. We stood and regarded each other for a moment.

We then tried the same method we had used with the male, guiding her along the fence line towards the open gate. She moved along, and at the same point as the male, she hit the invisible wall. I was ready this time and I didn't let her go down. I pushed her and she started jumping along backwards. Again, when she was near the trailer, I pushed her mid-jump right in. She landed just as easily as the male and I put her in her stall. She turned and stared at me with her blank stare, as if inviting me to try anything else. But once next to the male, they both calmed down considerably. I decided not to try to remove her fashion sock just yet and let her rest. So locked and loaded, we hit the road and headed back for New Orleans. There was a big storm coming with tornado activity possible and we wanted to get clear of the area. We checked on them repeatedly, but both birds were calm. Maybe they sensed that an escape attempt to the Atchafalaya swamp would only result in being eaten by alligators or a rougarou. We got all the way back to New Orleans and greeted the crew that was there to help us unload. I went to the female first. She was strangely calm in her stall. I was able to read her transponder number with no difficulties. I cut the sock off her neck and she remained calm. I then even bent down and managed to place a plastic band on her for identification. The vet came in and checked her out. All was well. Again, we had a short distance to the gate, but it was well lined with bully boards. I guided her out of the stall towards the back of the trailer. "Freedom—"I think I heard her mutter, and she circled around me and went back to her stall. (I really don't think she knows what that word means.) I guided her out of her stall again and gently pushed her to the edge of the trailer. She seemed to know what was needed, and she jumped down neatly. She took a couple of steps towards the new pen—and froze at the invisible wall of the open doorway. I unceremoniously shoved her butt through the gate. Once through she took off—"Freedom!!!"

I went back in for the male. I tried to read his transponder, but he got a little jumpy. I tried to put a plastic band on his leg, but he let me know in no uncertain terms that he did not want one. I made the informed and wise decision that two out of three birds banded meant you could tell everyone apart. I let the vet come in to look at him and the female came back over and tried to get back in the trailer. We sent her back to her yard. As soon as the vet was done I gently guided the male out of the trailer. He balked at the invisible wall briefly, but then saw the female out in the yard and decided maybe the ground wasn't molten lava and he stepped in to join her. Success!

Emu bubbles, photo by Alexandra Zelazo-Kessler, Virginia Zoo

We are looking forward to quarantine being over so we can load them up again and take them to meet Elvis in the exhibit.

Keeping Up With Kiwi

Kiwi Update by Kathy Brader, AZA Brown Kiwi SSP Coordinator

The Kiwi SSP has just completed its newest edition of the Kiwi Breeding and Transfer Plan, which is now posted on the AZA website. With this plan we will be setting up several new pairs both in Europe and North America. In the next two years we will have at least four females coming into age. Kiwi have a large range in which to mature, from 3 to 5 years. The earliest recording of a female producing an egg was with the Rowi species under 3 years of age.

Anyone that has worked with kiwi pairs knows it is all about the girls! If all goes according to the big plan our potential gene diversity can go up to almost 96% (currently we stand at 86%). We are gaining a new zoo in France and will be welcoming a zoo in Israel (a zoo that features just Australian animals, which means we can sneak in kiwi) this coming year. We also have some interest in obtaining kiwi from a zoo in the US and several more in Europe. This is fantastic news for the SSP as this allows us to keep growing. This coming fall, we will produce our next studbook for both North America and Europe. Our population stands at 48 birds (33.15). There were two significant losses that happened over the last year. The more significant lost was the recently imported male "Rima" at Frankfurt zoo this past summer. With his mate, "Wha", he produced four offspring with 2.1 living. Although these birds are too young to reproduce, they represent all important genetics. Frankfurt is waiting till this year to re-pair "Wha" and we all hope she likes her new mate! The other big loss was the breeding female at the Smithsonian National Zoo, "Nessus". Nessus and her mate had produced 3.3 offspring of which 1.2 are still living. The tragic loss was due to ingestion of a toad. This is the first recorded death due to eating a toad, a sad lesson for us all. The one consolation was upon her necropsy it was found that she had some serious reproduction problems which may have prevented her from breeding. "Maori", her mate, is a wild caught bird and will be transferring to Smithsonian Conservation Biology Institute in Front Royal, Virginia to be paired with a young female.

Offspring from Wha and Rima

On the New Zealand front, an interesting item of note was that a kiwi male (Rowi) over the past couple of seasons fathered offspring from two different females in the same season [kiwi are usually monogamous). The Rowi species (found on the west coast of the South Island) started out with a population of about 200 birds in 2006, they are now at 300-400 birds. This past fall, the release of 50 chicks from ONE (Operation Nest Egg) was the largest release so far. The goal is to have the population reach 600 birds by 2018. This past year the government pledged about $8 million (US) to boost the kiwi program to save kiwi, the largest amount contributed from the government to date.

Did you know that $100.00 will protect a kiwi for an entire year? If your zoo is looking for a way to help save kiwi the best foundation to donate to is the Kiwis for Kiwi (www.kiwisforkiwi.org.nz).

Nessus and Maori, Smithsonian National Zoological

Kiwi Feathers

We are preparing for our 5th donation of collected kiwi feathers to send back to New Zealand for the Maori to use in repairing kahu kiwi (kiwi feather cloaks) and for use in new projects. This program continues to be a big hit with the Maori who are very grateful to obtain these taonga (treasure) from all of us. I cannot even begin to tell you all how grateful I am for all the work done by participating zoos in collecting these feathers; this has given the overseas kiwi program the biggest boost in support from the Maori for the program.

If you missed this video from the New Zealand Embassy in Washington DC from 3 years ago, catch it here to get an idea of what a "big deal" this is: https://vimeo.com/50390409

Keeper Tracks

Meet Kate Karpuk from the Staten Island Zoo!

Kate with Lyn and Bill

Having grown up minutes from the Staten Island Zoo, I have always wanted to work with animals as far back as I can remember. In 2008, I was granted the opportunity to do so by the very institution that my family and I had visited so often when I was a child. Ultimately becoming assistant manager of the Children's Center, I began working with a variety of animals including rodents, kangaroos, and hoofstock. Among the most memorable experiences I have had, however, are included the opportunity to hand-rear several of the zoo's ratites.

Rearing emus and rheas from the time they were hatchlings has is been quite a unique experience. I have watched them grow into formidably sized birds, all presenting distinct personalities. In general, however, their friendly and inquisitive nature leads them to investigate every aspect of their world, even showing a fascination with certain parts of their keepers, hair or sunglasses, for instance.

Working closely with these birds has been at once challenging and rewarding, and I could not have accomplished what I have with them, if not for the encouragement of General Curator Marc Valitutto and the support of our 'Ratite Team.' Given the scarcity of available information pertaining to ratite training, the team initially needed to develop their skills in order to establish successful training protocols that would enable these birds to participate in the zoo's educational programs.

Time for Tinamous

Rusty Tinamou

(*Crypturellus brevirostris*)

A Rusty Tinamou (*Crypturellus brevirostris*) foraging. First ever photos taken of this elusive bird. Thanks to Vincent Rufray. Taken in Dorlin, Maripasoula, French Guiana, on 19 May 2013.
© Vincent Rufray

Internet Bird Collection. http://ibc.lynxeds.com/photo/rusty-tinamou-crypturellus-brevirostris/bird-seed-bill

A revealing new look at the secretive black tinamou. After decades in ornithological obscurity, one of the world's least-known birds is finally coming to light thanks to the persistence of a small group of researchers. Pablo Negret, Oscar Garzón, Pablo Stevenson, and Oscar Laverde-R. of the Universidad de los Andes have just published the results of their year-long study of the Black Tinamou (Tinamus osgoodi hershkovitzi) in *The Auk: Ornithological Advances*, including new ecological information as well as some of the first video and sound recordings of this elusive species. "New ecological information for the Black Tinamou (Tinamus osgoodi hershkovitzi)" is available at http://www.aoucospubs.org/doi/full/10.1642/AUK-14-116.1.

EAZA Update

by Jo Gregson, Vice Chair EAZA Ratite TAG

As most of you are aware, EAZA recently took responsibility for the Darwin's rhea while AZA have agreed to focus on the greater rhea. This allows both organizations a lot more holding space and also more time to focus on each species. Thus far progress with the Darwin's rhea has been slow. The studbook is new and so there is little historical data to work with. Hatchings are in good number, but the rearing has proven poor. Also, a few unfortunate random adult deaths have occurred. Already it is apparent that this rhea needs more husbandry research in particular with the rearing diets.

As of Dec 31, 2014, there were 98 individuals 46.51.1;

As of Dec 31, 2015, there were 102 individuals 41.56.5.

The Struthio camelus camelus (aka North African ostrich) EEP is moving forward very well with plans to collect more eggs from Morocco in the future. Some of the original birds (brought in as eggs) have now bred; and a few moves have taken place to set up new pairs. Five EAZA institutions are holding North African ostrich. The breeding has been very pleasing this year with 13 chicks from Hanover and 3 from Hamburg. Interestingly there were two hatching periods one between 13th June and the 23rd July, the other period started on the 18th September and went through to the 7th October .

AZA Struthioniformes TAG

Chair Sara Hallager, Smithsonian National Zoological Park
Vice Chair Scott Tidmus, Disney's Animal Kingdom
Secretary Nicole LaGreco, San Diego Zoo
James Ballance, Zoo Atlanta
Mike Taylor, Jacksonville Zoo and Gardens
Bruce Bohmke, Woodland Park Zoo
Lanny Brown, Nashville Zoo
Chad Comer, Blank Park Zoo
Mike Mace, San Diego Zoo Safari Park
Craig Mikel, Louisville Zoological Garden
Kristi Newland, Lee Richardson Zoo
Cindy Pinger, Birmingham Zoo
Bonnie Van Dam, Detroit Zoological Park
Kelly Vineyard, Columbus Zoo
Joshua Watson, Santa Fe Teaching Zoo

Nutrition Advisors

Roselina Angel, University Maryland, College Park

Mike Maslanka, Smithsonian's National Zoological Park

Education Advisor

Carrie Brooks, Birmingham Zoo

Cassowary, Emu and Rhea Veterinary Advisor

Marc T. Valitutto, Staten Island Zoological Society

Ostrich Veterinary Advisor

Peter Black, Busch Gardens Tampa

WCMC Liaison

Chelle Plasse, Disney's Animal Kingdom

SPMAG

John Andrews, Lincoln Park Zoo

Enrichment Coordinator

Dana Urbanski, North Carolina Zoo

Keeper Representative, Monica Halpin, Zoo Atlanta

Newsletter Editor, Monica Halpin, Zoo Atlanta

Program Leaders

Kathy Brader, Brown Kiwi, Smithsonian National Zoological Park
Kristen Clark, Greater Rhea, Smithsonian National Zoological Park
Kristen Clark, Elegant Crested Tinamou, Smithsonian National Zoological Park
Nicole LaGreco, Southern Cassowary, San Diego Zoo
Jim Lotz, Andean Tinamou, San Diego Zoo Safari Park

Species Champions

Monica Halpin, Emu, Zoo Atlanta
Scott Tidmus, Ostrich, Disney's Animal Kingdom