

Coraciiformes TAG

2014 AZA Midyear – Memphis, TN

AZA 2014 MID-YEAR MEETING



March 22-28, 2014
Memphis, TN



ASSOCIATION
OF ZOOS
& AQUARIUMS

Coraciiformes TAG Officers

Chair	Paul Schutz	Disney's Animal Kingdom
Vice Chair	Roger Sweeney	Virginia Zoo
Secretary	Kevin Graham	Disney's Animal Kingdom



Coraciiformes TAG Steering Committee Members

John Azua	Denver Zoo
Chad Davis	Brevard Zoo
Susan Healy	Sacramento Zoo
Michael Mace	San Diego Safari Park
Michael Macek	St. Louis Zoo
Mark Myers	Woodland Park Zoo
Paul Schutz	Disney's Animal Kingdom
Peter Shannon	Albuquerque Zoo
Tim Steinmetz	Kansas City Zoo
Roger Sweeney	Virginia Zoo
Julie Tomita	Lowry Park Zoo



Coraciiformes TAG Program Managers

Vacant

Eric Kowalczyk

Rachel Ritchason

Melissa Ramsey

Maureen Cleary

Yvonne Stainback

Beth Bahner

Mark Myers

Tim Snyder

Kevin Graham

Kevin Graham

Ground Hornbills

Sunda (Wrinkled) Hornbill

Rhinoceros Hornbill

Great Hornbill

Red-billed Hornbill

Trumpeter Hornbill

Guam Micronesian Kingfisher

Laughing Kookaburra

Blue-bellied Roller

Blue-crowned Motmot

Green Woodhoopoe



Coraciiformes TAG Advisors

Veterinary Advisor

Kathryn Gamble, DVM, MS, Dipl ACZM, Dip ECZM

Lincoln Park Zoo

Nutrition Advisor

Ellen Dierenfeld

Zootrition Software

Species	SSP Coordinator	Assumption Date	Origination Date
Southern Ground Hornbill	Currently Vacant		June 1989
Abyssinian Ground Hornbill	Currently Vacant		June 1989
Great Hornbill	Melissa Ramsey	December 2013	June 1989
Rhinoceros Hornbill	Rachel Ritchason	December 2011	June 1989
Sunda (Wrinkled) Hornbill	Eric Kowalczyk	February 1999	February 1999
Trumpeter Hornbill	Yvonne Stainback	November 2013	September 1999
Silvery-cheeked Hornbill	Cindy Dupree	August 2004	September 1999
Red-billed Hornbill	Maureen Cleary	November 2013	September 1999
Guam Micronesian Kingfisher	Beth Bahner	January 1986	January 1986
Laughing Kookaburra	Mark Myers	September 1990	September 1990
Blue-bellied Roller	Tim Snyder	July 1999	July 1999
Blue-crowned Motmot	Kevin Graham	September 1999	September 1999
Green Woodhoopoe	Kevin Graham	December 2008	August 2002

Southern Ground Hornbill

Bucorvis leadbeaterii

Program Manager:
Currently Vacant



Current Population
RCP Population Target
Most Recent Studbook Publication
Most Recent PMC Planning Session
Next Scheduled PMC Planning Session

Yellow
63.63.0
February 2012
18 November 2011

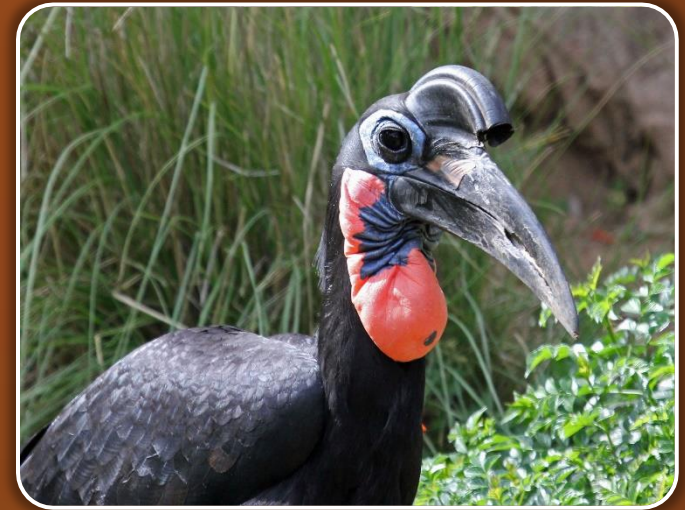
Goals for SSP

- I
- II
- III

Abyssinian Ground Hornbill

Bucorvis abyssinicus

Program Manager:
Currently Vacant



Current Population
RCP Population Target
Most Recent Studbook Publication
Most Recent PMC Planning Session
Next Scheduled PMC Planning Session

Yellow
50.50.0
February 2012
12 June 2012

Goals for SSP

- I
- II
- III

Great Hornbill

Buceros bicornis

Program Manager:
Melissa Ramsey – San Diego Zoo



Current Population	25.17.1	Red
RCP Population Target	50.50.0	
Most Recent Studbook Publication	14 February 2013	
Most Recent PMC Planning Session	N/A	
Next Scheduled PMC Planning Session	June 2014	



Goals for SSP

- Organize a breeding plan
- Create at least 1 new pairing for the 2015 season
- Follow up on hormone study and "dating center" concept to gather scientific data that may help influence future recommendations

Rhinoceros Hornbill

Buceros rhinoceros

Program Manager:
Rachel Ritchason – Santa Barbara Zoo



Current Population	28.31	Yellow
RCP Population Target	35.35.0	
Most Recent Studbook Publication	2 March 2014	
Most Recent PMC Planning Session	2 March 2014	
Next Scheduled PMC Planning Session	N/A	



Goals for SSP

- Continue to hold juvenile birds as a group to encourage mate choice
- Work with EAZA RHB Coordinator to exchange birds
- Encourage more holding institutions to participate in the Buceros Endocrinology Study (San Diego Institution for Conservation Research)
- Currently held at 22 institutions, 2 additional facilities will be added in ~ 2014

Sunda (Wrinkled) Hornbill

Aceros corrugatus

Program Manager:
Eric Kowalczyk – Woodland Park Zoo



Current Population
RCP Population Target
Most Recent Studbook Publication
Most Recent PMC Planning Session
Next Scheduled PMC Planning Session

35.28.0 (63) **Yellow**
35.35.0
31 December 2013
December 2011
October 2014



Goals for SSP

- Intensify attempts to work with Europe (EAZA) and Asia (mostly Jurong BirdPark) in sending some of the birds from the Honolulu bloodline out of this managed regional population.
- Continue efforts to support in situ conservation programs.
- Continue maintaining records and making recommendations for other hornbill species in the genera: *Aceros*/*Rhyticeros*/*Berenicornis*.

Trumpeter Hornbill

Bycanistes bucinator

Program Manager:
Yvonne Stainback – Caldwell Zoo



Current Population	Yellow
RCP Population Target	25.25.0
Most Recent Studbook Publication	23 May 2011
Most Recent PMC Planning Session	2008
Next Scheduled PMC Planning Session	End of 2014



Goals for SSP

- Update Institutional Representative list
- Update Studbook and Publish by the end of 2014.
- Publish Breeding and Transfer Plan by the end of 2014.

Silvery-cheeked Hornbill

Bycanistes brevis

Program Manager:
Cindy Dupree – Central Florida Zoo



Current Population
RCP Population Target
Most Recent Studbook Publication
Most Recent PMC Planning Session
Next Scheduled PMC Planning Session

Monitoring – No Program
No Current Target Set



Goals for SSP

- I
- II
- III

Red-billed Hornbill

Tockus erythrorhynchus

Program Manager:
Maureen Cleary – Sacramento Zoo



Current Population
RCP Population Target
Most Recent Studbook Publication
Most Recent PMC Planning Session
Next Scheduled PMC Planning Session

24.23.1 Red
40.40.0
December 2012
7 February 2012
Not Scheduled Yet



Goals for SSP

- I recently acquired this studbook so one goal is to update the studbook and establish contacts at all current and future holding institutions
- Increase breeding institutions and holding institutions
- Publish this studbook next spring

Guam Micronesian Kingfisher *Todiramphus cinnamominus*

Program Manager:
Beth Bahner – Philadelphia Zoo



Current Population	84.64.7	Yellow
RCP Population Target	75.75.0	
Most Recent Studbook Publication	18 December 2012	
Most Recent PMC Planning Session	11 December 2012	
Next Scheduled PMC Planning Session	September 2014	



Goals for SSP

- Work with re-activated FWS Recovery Committee to develop plan to support and expand the current captive breeding program and establishment of a wild population of Micronesian kingfishers within 5 years.
- Increase the number of participating institutions – population growth is essential for future release efforts . This program will be a serious risk of collapse without additional institutions to hold/breed birds.
- Initiate work on transformation of 1998 Husbandry Manual into an Animal Care Manual first draft. Incorporate data obtained by A. Alba, University of Missouri –Columbia grad student currently evaluating husbandry practices and stress factors for this species.

Guam Micronesian Kingfisher

Population Status & Activity 2013 (2/5/14)



Total Population 2/14:	84.64.7 (155) , +7 from 4/13
Total Fertile Eggs '13:	35 from 14 pairs (DISnot included)
Total Viable '13:	22 from 11 pairs (11 parent reared/20 attempts) (11 hand reared/15 attempts)
Total Deaths '13:	8.7.12 (27) (DISnot included) 13 non-viable (6 MIA), 1.0 17 yrs, 1.0 15 yrs, 1.3 9-10yrs, 1.0 7 yrs, 2.3 3-4 yrs, 1.1 1-2 yr
Total Pairings:	51 pairs recommended for '13 season Breeding & transfer plan for 2014 in preparation

Managed population/world population includes birds in 22 AZA facilities and Division of Aquatic & Wildlife Resources (DAWR) facilities on Guam. For 2014, one new institution has expressed interest: **Sedgwick County Zoo ☺**

Regional Studbook available on the AZA website (as posted current to December 2012, working studbook current to 2/14)



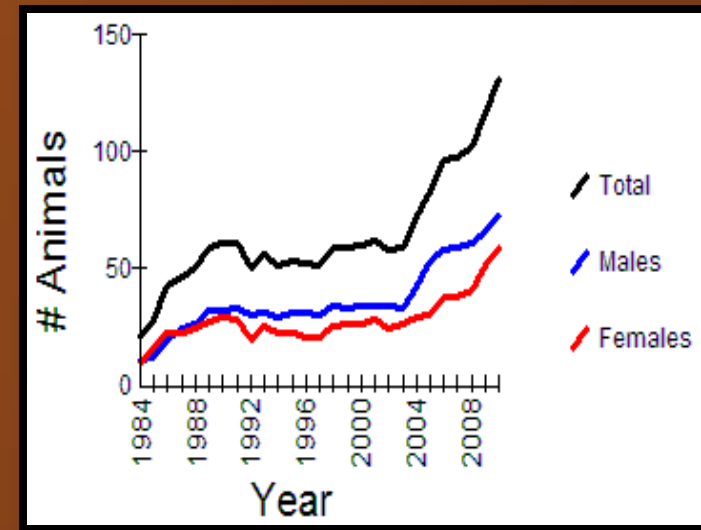
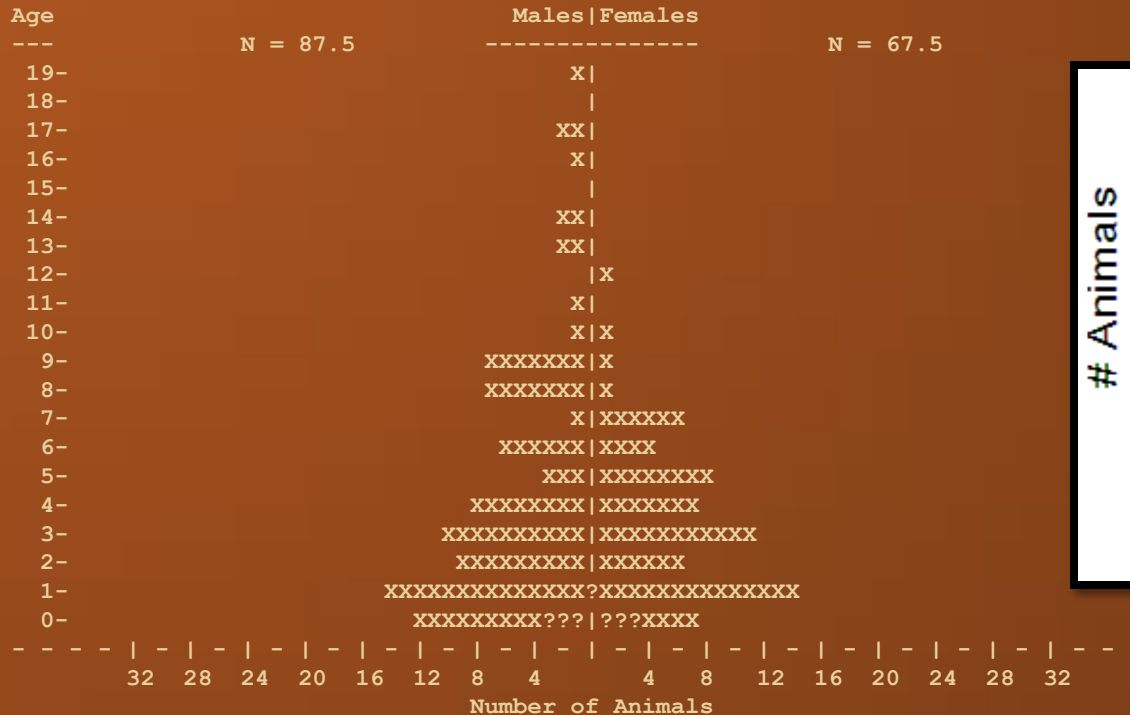
Guam Micronesian Kingfisher Age Pyramid

Age Pyramid Report

Restricted to: GUAM MICRONESIAN KINGFISHER Studbook

Status: Living on 11 Feb 2014

Taxon Name: TODIRAMPHUS CINNAMOMINUS CINNAMOMINUS



X >>> Specimens of known sex...

? >>> Specimens of unknown sex...

Compiled by: Beth Bahner Studbook Keeper thru Philadelphia Zoological Gardens

Data current thru: 1 Feb 2014 North American Regional

“JOIN US” AS WE CELEBRATE 30 YEARS OF SAVING MICRONESIAN KINGFISHERS!



Photo credit: Jim and Pam Jenkins, Smithsonian's National Zoo

The FWS Micronesian Kingfisher Recovery Committee has been reactivated with the intent of moving the release program forward. In order to support a release we need to continue to expand the population. While a population of 150 birds is a tribute to our long term commitment and recent successes, we need to keep growing.

Although caring for Micronesian kingfishers requires an institutional commitment, this is an excellent opportunity for more AZA zoos to become involved in a rescue effort initiated 30 years ago as we see it through to fruition. We need zoos willing to hold and/or breed. If you have some space available, please talk to other members of the Management Group to see how you might contribute to this program and contact Beth Bahner, SSP Coordinator, Philadelphia Zoo.

Laughing Kookaburra

Dacelo novaeguineae

Program Manager:
Mark Myers – Woodland Park Zoo



Current Population	229 (111.112.6) Yellow
RCP Population Target	100.100.0
Most Recent Studbook Publication	1 January 2014
Most Recent PMC Planning Session	2 May 2013
Next Scheduled PMC Planning Session	February 2014



Goals for SSP

- Manage population at or near RCP approved target
- Continue focus on breeding only the most genetically valuable pairs in the population
- Evaluate need for periodic imports from Australia for improvements/maintenance of GD in population
- Facilitate exportation of select surplus birds to Cali Zoo, Columbia and Ocean Park, Hong Kong

Blue-bellied Roller

Coracias cyanogaster

Program Manager:
Tim Snyder – Brookfield Zoo



Current Population
RCP Population Target
Most Recent Studbook Publication
Most Recent PMC Planning Session
Next Scheduled PMC Planning Session

77.72.3 **Yellow**
100.100.0
1 October 2012
18 February 2014
N/A



Goals for SSP

- Begin work on Animal Care Manual
- Initiate diet study across AZA institutions

Blue-crowned Motmot

Momotus momota

Program Manager:
Kevin Graham – Disney's Animal Kingdom



Current Population	65.69.4	Yellow
RCP Population Target	100.100.0	
Most Recent Studbook Publication	26 January 2013	
Most Recent PMC Planning Session	14 June 2013	
Next Scheduled PMC Planning Session	October 2014	



Goals for SSP

- Continue work on the Animal Care Manual and have a draft version ready for review by the end of the year.
- Increase the number of holding institutions and continue to add institutions exhibiting single-sex flocks to hold reserve population when needed.
- Work with AZA and EAZA to transfer birds to their population to increase genetic diversity, population numbers, and balance the population by gender.

Green Woodhoopoe

Phoeniculus purpureus

Program Manager:
Kevin Graham – Disney's Animal Kingdom



Current Population	54.51.6	Yellow
RCP Population Target	100.100.0	
Most Recent Studbook Publication	25 January 2014	
Most Recent PMC Planning Session	29 August 2012	
Next Scheduled PMC Planning Session	24 March 2014	



Goals for SSP

- Continue to equalize founder representation within the population and explore the potential for additional founders to increase genetic diversity
- Increase the number of participating institutions to allow an increase in the overall population
- Continue work on the first draft of the Animal Care Manual for review and publication during 2015

Pied Kingfisher

Ceryl rudis

Program Manager:
N/A

Current Population	0.0.0
RCP Population Target	20.20.0



A review of global ISIS data for Kingfishers shows no Cerylidae in collections, small numbers of one species in the Alcedinidae and several small to medium populations in the genera Dacelo and Halcyon. The most likely explanation for this is that the Dacelonids are predators of small ground animals, easier to transfer to artificial diets than the fish feeding Cerylidae and the insect and fish eating Alcedinidae. The TAG agreed that it would be valuable to develop management protocols for a non-Dacelonid Kingfisher and the Pied Kingfisher (*Ceryl rudis*), a common species with an enormous range, was identified as a potential. Contact was made with the Entebbe Zoo, in Uganda, where Pied Kingfishers nest on the grounds. A keeper from Entebbe visited several US zoos, and Marcia Arland, from the Bronx Zoo, visited Entebbe. The program has stalled because facilities for the program in US zoos could not be identified but the TAG voted to continue to pursue this objective.

Hoopoe (African or Eurasian)

Upupa epops

Program Manager:
N/A

Current Population	0.0.0
RCP Population Target	50.50.0



The hoopoe is an extremely desirable and easily maintained exhibit bird, however it is now extinct from U.S. collections. Because of extremely high interest from AZA facilities and space available for at least 100 birds, it was designated for a proposed new program in the first edition of the RCP and has continued to be recommended in the subsequent publications. A group of birds previously scheduled to arrive fell through because of logistical challenges and health problems of the exporter. The TAG continues to pursue this program but no current progress has been made in the importation of birds.

Bee-Eaters

Merops spp.

Program Manager:
N/A

Current Population	Varies by Species
RCP Population Target	Varies by Species



Until recently, bee-eaters have been uncommon in collections; as aerial insectivores they are difficult to acclimate to a captive diet. About 20 years ago their numbers increased in the US almost exclusively due to importations. Recently zoos, both in the US and in Europe, have begun to solve the problems inherent in their management and captive reproduction. Though still rare, breeding has begun to appear. EAZA has recently imported a very sizable group of Carmine bee-eaters into their collections and very limited reproduction has occurred. As brightly colored colonial birds with open habits, their potential for exhibit and education is high, although no species are endangered.

Three species, *Merops nubicus* (Carmine), *M. albicollis* (white-throated) and *M. bullockoides* (white-fronted) are most common in AZA zoos. At this point, the emphasis is on learning bee-eater aviculture and future importations are likely necessary to consider PMP status.

Coraciiformes TAG Veterinary Advisor

Kathryn Gamble – Lincoln Park Zoo

- Coraciiformes chapter in Fowler 8 Current Therapy
- In construction manuscripts:
 - carotenoids in uropygial gland secretions of Buceros hornbills
 - squamous cell carcinoma risk factors of Buceros bicornis hornbills
- Iron storage disease in Asian hornbills update (summarized in Fowler and separate abstract published in 2012)
- Review and update of preventive medicine and quarantine/preshipment recommendations
- Dr. Gamble is on the hunt for additional assistance for non-hornbill Coraciiformes to do some data mining through the pathology documents that she already has. It will determine if we have some other disease threads that need pursuit...i.e., bee-eaters with uropygial gland squamous cell carcinoma and how that may tie into carotenoids, etc.



Exploring.

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Coraciiformes TAG Newsletter

Initial issue slated for publication in June 2014 pending call for articles.

Goal for publication will be 2 issues per year with a target length of approximately 10 pages per issue.

Regional Collection Plan

Animal Care Manuals



Only when the last tree is cut; only when the last river is polluted; only when the last fish is caught; only then will they realize that you cannot eat money.

- Cree Indian Proverb

