

Crocodile Specialist Group Steering Committee Meeting
Double Tree Hilton, Darwin, Australia
(15 April 2024)

Zoos Thematic Group

Report on Activities:

1. New CSG co-Vice Chair for Zoos Thematic Group
Since the last CSG meeting, Colette Adams (Deputy Director, Gladys Porter Zoo, Brownsville, Texas, USA) has been selected to be co-Vice Chair of the CSG Zoos Thematic Group.

2. IUCN SSC
In November 2023, the IUCN SSC published its “Position Statement on the Role of Botanic Gardens, Aquariums, and Zoos in Species Conservation” formally recognizing the role of these living institutions and endorsing the linking of *in situ* and *ex situ* programs aimed at saving threatened and endangered species.

3. Activities in North American Zoos
 - a. Changes in AZA Crocodylian Advisory Group (CAG) Programs
 - i. In the past, the CAG had 8 Species Survival Plans (SSP) programs for crocodylians, plus a couple of additional studbooks. These were our (SSPs):
 1. Chinese alligator, *Alligator sinensis*, Yellow SSP
 2. Cuban crocodile, *Crocodylus rhombifer*, Yellow SSP
 3. West African Slender-snouted crocodile, *Mecistops cataphractus*, Yellow SSP
 4. Siamese crocodile, *Crocodylus siamensis*, Red SSP
 5. Gharial, *Gavialis gangeticus*, Red SSP
 6. Tomistoma, *Tomistoma schlegelii*, Red SSP
 7. Orinoco crocodile, *Crocodylus intermedius*, Red SSP
 8. Philippine crocodile, *Crocodylus mindorensis*, Candidate SSP
 9. West African crocodile, *Crocodylus suchus*, Studbook only
 10. African Dwarf crocodiles, *Osteolaemus* spp., Studbook only

 - ii. In the past few years, AZA initiated a program of “Reimagining SSPs.” Currently, these cooperative management programs among AZA institutions are no longer aimed at conservation, but rather, *ex situ* sustainability. New SSP-designation is granted only to species that are: housed in at least 15 AZA institutions; have sufficient numbers of specimens; and, contain enough genetic diversity (GD) within the population to maintain at least 90% GD for 100 years.

Only two of our programs survived the reimagining process: Chinese alligators and Tomistoma are now “Provisional SSPs,” with our remaining programs now simply managed as studbooks. Provisional SSPs must meet the SSP criteria or these programs will lose their SSP designations as well.

 - iii. Our primary concerns with the loss of SSP status for many of our endangered and critically endangered crocodylian species are the possibility that these changes will ultimately result in less spaces for these species, should institutions aim to only support SSPs. The loss of SSP status may make it more difficult for fundraising to support *in situ* projects. The lack of SSP recognition will almost certainly make it more difficult to acquire import permits for endangered crocodylians to supplement our populations. These changes are also heartbreaking for many of us as these changes fail to acknowledge all the hard work over the years of our SSP coordinators for species that no longer carry that designation. Most notably, Bill McMahan, Curator of Herpetology at Louisville Zoo and, now former, SSP Coordinator for the Cuban crocodile, did remarkable work for more than 30 years, guaranteeing the genetic purity of our crocodiles, reproducing Cuban crocodiles to build our population size, working with Cuban crocodile biologists, and facilitating community education programs in Cuba.

- iv. New AZA SAFE Program for Cuban crocodiles
 - 1. The Cuban crocodile is no longer an SSP species within the AZA, but it has been selected for the SAFE program. Conservation will now be the work of AZA SAFE Programs. Lauren Augustine (Philadelphia Zoo), Kevin Torregrosa (Wildlife Conservation Society) and Brian Henley (Cameron Park Zoo), along with several others, put great effort into getting the SAFE designation for *C. rhombifer* and have been working closely with Cuban biologists for this. Lauren Augustine will be speaking on the Cuban crocodile SAFE program during our regular presentations and has written a short article regarding this for the CSG Newsletter. This SAFE program will increase focus and collaboration within AZA to support the Zapata Crocodile Farm and Cuban crocodile conservation *in situ*. The Cuban Crocodile SAFE program plan is due to be published soon.

Palmer, J.L., A. Nieto-Claudín, G.S. Rodriguez, E.P. Fleitas, L. Augustine and S.L. Deem. 2023. Hematology and blood chemistry values in Cuban crocodiles (*Crocodylus rhombifer*) housed at the Zapata Swamp Crocodile Farm, Cuba. *Journal of Zoo and Wildlife Medicine* 54(2): 301-309.
 - 2. In April 2023, Kelvin Alvarez (Wildlife Conservation Society - Bronx Zoo), was able to go back to Cuba for the first time since before the Pandemic. The team identified new problems that the farm is facing due to fuel and food shortages on the island. They are also working with them to establish incubation temperatures and confirm hatches of more male crocodiles.
 - 3. Knoxville Zoo recently donated \$3000 to the Cuban Crocodile SAFE fund for future projects.
- v. Kelvin Alvarez (Wildlife Conservation Society - Bronx Zoo) is the new Tomistoma SSP Coordinator and Studbook Keeper.

b. Other Activities

- i. The Virginia Aquarium & Marine Science Center hatched a couple of Tomistoma in September 2022 for the first time. The Virginia Aquarium also reported these donations toward crocodylian conservation: CSG - \$2500 (March 2022); CrocFest 2023 - \$1000 (May 2023); CSG - \$2000 (June 2023); and, Winter CrocFest 2023 - \$500 (November 2023)
- ii. Fort Worth Zoo successfully hatched Gharials (*Gavialis gangeticus*) for the first time (and only the second time in the USA), producing 3 surviving hatchlings. Fort Worth Zoo also donated \$750 to CrocFest (May 2023).
- iii. Ellen Trout Zoo is the process of constructing 8 new off-exhibit enclosures for those species we have that are not currently on exhibit. This will include a breeding enclosure for Cuban crocodiles. Ellen Trout Zoo also donated \$1000 to CrocFest (May 2023).
- iv. Since June 2022, Bronx Zoo has contributed around \$14,000 toward croc projects. They provided \$10,000 for Jeff Lang's work with Gharial, \$1500 to CrocFest, and around \$2500 toward our work with *C. rhombifer* in Cuba.

c. "Croc school"

In May 2023, the 20th iteration of Crocodylian Biology and Captive Management, known fondly to instructors and past students as "Croc School", was held at the St. Augustine Alligator Farm Zoological Park after a 4-year hiatus due to COVID-19 and scheduling issues. This course was created by the Crocodylian Advisory Group and many of its instructors are important members of the CAG. It has always been administered by AZA Professional Development. Following last year's course, St. Augustine and AZA Professional Development initiated discussions regarding St. Augustine taking over the course completely, freeing time and resources for AZA to develop a new course. So, beginning in May 2024, this course, now called Crocodylian Biology and Management will be hosted and managed by the Alligator Farm.

d. CrocFest

The following submitted by Colette Adams, one of the primary administrators of CrocFest (along with Curt Harbsmeier and Flavio Morrissiey):

Since its humble beginning 15 years ago, CrocFest has hosted 25 events and raised over \$US900,000 to support crocodylian research and conservation programs in 20 countries.

Funds raised through CrocFest are sourced from corporations catering to the reptile industry, academics, CSG members, zoos and individual zoo employees, and a unique private audience of reptile enthusiasts who enjoy getting together to tour animal exhibits, eat and drink together, and do something good for crocodylians.

After the volunteers who donate their time and energies towards these biannual events, credit for CrocFest's success goes largely to zoos. Since 2017, every event has been hosted by a zoological facility - all within the state of Florida. In addition to surrendering a significant portion of sales at the front gate to CrocFest admissions, these zoos have dedicated staff time for planning, carrying out the event, and keeping their parks staffed past 10 pm for cleanup. They have sponsored t-shirts, in some cases covered the costs of an event-wide feast and paid for the requisite advertising and beer.

In 2023 alone, zoos provided \$36,000 in cash donations - over one third of the funds raised for projects - in support of CrocFest initiatives.

St. Augustine Alligator Farm Zoological Park has hosted nearly half of the events since 2017. Wild Florida Gator and Safari Park, Gatorama, Busch Wildlife Sanctuary, Gatorland, ZooTampa, Everglades Alligator Farm, and Zoo Miami have all hosted as well - in some cases more than once. In the early days, very successful events were hosted by private facilities, including Shawn Heflick's Crocodile Manor, but as the popularity of CrocFest grew, so did the expectation of eventgoers that their cost of admission would include the ability to tour facilities with established animal collections and exhibits geared toward public engagement.

Finally, the non-profit Gladys Porter Zoo in Brownsville, Texas, collects, donates accounting services for, and administers CrocFest funding free-of-charge, lending legitimacy to the fiscal management of the program. Tax-exempt documentation is also provided to donors by this zoo.

Since our report from the 26th CSG Working Meeting in Mexico in 2022, CrocFest reports the following:

- Summer CrocFest 2022, hosted by Everglades Alligator Farm, \$50,000 for *Crocodylus intermedius*. Venezuela and Colombia
- Winter CrocFest 2022, hosted by St. Augustine Alligator Farm Zoological Park, \$51,000 for *Melanosuchus niger*. Guyana, French Guiana and Suriname
- Croc School CrocFest 2023, hosted by St. Augustine Alligator Farm Zoological Park, \$68,000 for *Gavialis gangeticus*. India.
- Winter CrocFest 2023, hosted by Wild Florida Gator and Safari Park, \$40,000 for *Crocodylus acutus*. Guatemala.

4. Activities in Europe

- a. I have minimal information from European Zoos. I'm sure Fabian Schmidt's Regional Europe Report will include numerous zoo-related items.
- b. We have been in contact with Shaun Foggett (Crocodiles of the World, UK). He has 6 juvenile Chinese alligators hatched over the last few years, and he is open to sending them to the USA. This would facilitate building the genetic diversity of our North American population. Kevin Torregrosa (Chinese alligator SSP Coordinator) would send him some of the animals hatched at US Zoos.
- c. Thomas Ziegler reported that Cologne Zoo has again repatriated three *Crocodylus mindorensis* hatched at the zoo in 2021 to the Philippines, in summer 2023, received by Crocodylus Porosus Philippines, Inc. (CPPI). This is the second such repatriation of captively born Philippine crocodiles by Cologne Zoo; the first in 2020 when two crocodiles were transported to the Philippines. These two crocodiles are still doing well there.

Cologne Zoo's Crocodile related papers published in 2023:

Mobaraki, A., Erfani, M., Abtin, E., Brito, J. C., Tan, W. C., Ziegler, T. & D. Rödder (2023). Last chance to see? Iran and India as strongholds for the Mugger Crocodile (*Crocodylus palustris*). *Salamandra* 59(4): 327-335.

Ziegler, T. (2023). The IUCN/SSC CPSG's One Plan Approach and the role of progressive zoos in conservation: case studies from herpetology. Pp. 195-222 in *Proceedings of the 14th National Congress of the Italian Society for Herpetology*, Torino.

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