



**William “Chip” Harshaw, Curator of Mammals & Reptiles
and Animal Training Supervisor**

1. Where did you get your undergraduate degree from and in what major?

Guilford College, Greensboro N.C. - Anthropology and Geology

2. How long have you been with the Aquarium?

Since October 1, 1995

3. Briefly describe your primary involvement with the *Restless Planet* exhibit.

I am responsible for identifying animal sources, their acquisition and permitting issues to acquire all reptiles and mammals for *Restless Planet*. This includes our crocodiles, Komodo dragons, venomous snakes, scorpions and non-venomous terrestrial animals. In addition, I have been closely involved in all aspects of the architectural designs for these animals. Some of these designs are very complex.

Many of our new animals are very different from what we have worked with in the past. The staff are having to learn how to work with some of the highly specialized and extremely dangerous animals. Because of these things, I am responsible for the new safety protocols and training of staff to work with these animals.

4. What has been your biggest challenge?

So many things have been and will continue to be challenging. Perhaps one of the Aquarium's single most difficult efforts was finding a male and then a female Tomistoma crocodile and attempt to pair them together. This has personally been an enormous challenge for me. I have literally searched the world for these animals. Tomistoma crocodiles are classified by the IUCN (International Union of the Conservation of Nature) as CITES (Convention of International Trade of Endangered Species), Appendix 1. Appendix 1 is a category meaning our crocodiles fall into an elite group of highly endangered species that face the greatest risk of extinction in the wild.

Nearly six years of effort went in to identifying the animals, then obtaining permission from the facilities where they were housed to allow us to take and pair them with a new animal. The permitting efforts to bring the female in to our country was a significant effort which required advance planning for several years.

Our male crocodile was born in 1985 at the Miami Metro Zoo. This was a very rare occurrence as breeding these animals has proven very difficult. He had been for years living at another facility in Florida alone as he did not get along with the female he was originally paired with. The female was also born the same year at the Bronx Zoo in New York. This was purely

coincidental. The female “Gloria” was sent to the Toronto Zoo almost 20 years ago and has lived in this facility alone for many years. No one had ever attempted to import the female due to the difficulty of the process.

It was however recommended by a few different crocodylian specialists groups in the zoological community to try to pair these two together with the hopes of breeding. Because of this, we took the challenge and succeeded.

Moving the 13 ft. male from one park in Florida to another temporary site on the opposite coast of Florida was a challenge, but not a huge challenge compared to getting the female out of Canada. In the end, it was extremely interesting to remove the 12 ft. female from her very small home of 20 years, place her in a crate, and then fly with her on a FedEx jet in to the U.S. Upon landing, we were carefully inspected by U.S. Fish & Wildlife to confirm all permits and documents were in order. Once this was confirmed, she was an instant celebrity due to her endangered status.

If so, we must then introduce them into their new home. Of course, the goal is to have them breed another generation of young crocodiles, but this will be extremely difficult.

*Another very difficult process for me was importing antivenom or as it is called antivenin. This medication is to treat an envenomation should one of us be bitten by an Egyptian cobra, green pitviper, or stung by one of the most deadly scorpions in the world, the fat-tail scorpion from North Africa. Acquiring these medications took a significant effort that included learning what types of medications to acquire, how much should be purchased, where to find these products, and then simply contacting the manufacturers of these products to order them.

Our cobra antivenin was produced in South Africa. The green pitviper antivenin was produced in Thailand, and the scorpion antivenin was produced in France.

I had to overcome language barriers and time differences. In one instance I was told by the French manufacturers that they could not provide me the scorpion antivenin as it is difficult to produce and is almost exclusively provided to military personnel stationed in North Africa. This particular medication took me almost two years to obtain.

A big hurdle is that these medications are not produced in the U.S. and thus are not F.D.A. approved. If I walk in to a hospital after having been envenomated by a foreign animal and bring the imported antivenin, there is a good possibility that treatment with the medication could be delayed. This is because the attending physician would need a crash course if it is okay to use the medication. The problem is that it is very important to begin treatment immediately. To combat this problem, we have been educating local emergency responders about this issue.

Our cobras and scorpions produce very powerful venoms. These animals are responsible for many deaths throughout Africa annually. Without these medications a bite or sting could cause death.

5. What are you most excited about guests seeing?

Everything! We are putting together so many new things, it will be awesome. The Komodos are very cool animals and getting them was a big challenge.

6. What *Restless Planet* fact would surprise guests if they knew?

Our tomistomas are considered one of the largest species of crocodiles in the world. They can grow over 20 ft. long and live 100 years. They are also perhaps the least understood species of crocodiles as they live in remote locations of Borneo and Sumatra. Tomistomas in the wild have been known to eat monkeys and birds that come down to the water to drink or wade. They have also killed unfortunate people on rare occasion.

Also, our scorpions are considered to be one of two of the most dangerous species of scorpions in the world. We are the only facility in the U.S. that holds the antivenin for them.

Our Komodos saliva does not have the bacteria in it that their cousins in the wild have. This is because in a zoological setting, they are not eating carrion or other rotting foods like they do in the wild.

We will have a behavioral training program with our crocodiles and Komodos to help us more effectively manage them. You can not make large dangerous animals sit still or not bite you if you try to (for example) give them a medical examination or treat an illness. We hope that by training them, they will see us as a positive element in their lives. They will trust us and learn that good things happen when we are around.

7. Once *Restless Planet* opens, how will your job differ?

Basically, I will have a larger more dangerous collection of animals to work with and oversee. In addition, our staff is growing. My previous responsibilities will continue on, but my new responsibilities will require me to better organize myself.

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