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Thailand



Thai culture emphasizes dragons, elephants and the Budha, but not crocodiles. Photo by Bill Magnusson.

The CSG held a regional meeting in Thailand in 2011. Albertina and I had been married 18 years by this time and she was keen to visit Thailand because she loves Thai food. I was also interested because crocodile management in Thailand had been talked about since the first meetings of the CSG. Utai Youngprapakom had been farming crocodiles in Thailand since the 1950s, and the propaganda for the crocodile farm and the reports at the CSG meetings indicated that the industry was largely responsible for the continued survival of *Crocodylus siamensis*, one of the most endangered crocodiles in the world. Thailand has a high population density, and I wanted to see a place where people were so dense that even a swamp crocodilian could not survive.

Youngprapakom is such a Thai sounding name that I was surprised to learn that Utai Youngprapakom came from a family of Chinese immigrants, and that the name had been adopted to avoid prejudice against Chinese by traditional Thais. Thailand had the largest crocodile farming industry in the world, but it was not the outgrowth of traditional knowledge about crocodiles and their ways, but an intensive business that had been created by recent immigrants who knew almost nothing about wild crocodiles.

The terminal in Bangkok was the largest and most modern airport I had seen, and it was decorated with an outstanding variety of orchids. There were literally tens of thousands of them in intricate displays. There were also giant statues of the Buddha and images of Hindu Gods. The delicate aesthetic balance between high technology, floral arrangements, and spiritual worship was like nothing I had experienced before. We would travel into areas of Thailand where the people were very poor, and the technology was more at the level of bicycles than airplanes. Nonetheless, everywhere we went, people devoted much time to make their homes aesthetically pleasing, often with floral arrangements, and the air of spiritual devotion permeated everything.

There seems to be a temple on every street corner in Thailand. I am sure that if you had a motorcycle and a good map you could see a thousand in a day. Albertina and I went to some of the oldest and most famous, but temple visiting soon becomes tedious because we didn't remember whether that outstanding dragon statue was the one we saw yesterday or the day before, or the day before that or You don't have to travel far in Thailand to conclude that the Thais have fixations for the Budha, for dragons, and for elephants. Their statues are everywhere, and where there is no statue there will be a painting, a tapestry, or a floral arrangement depicting one of them.

Dragons may have elements of crocodiles in them. They appear to be hybrids between snakes and large four-footed reptiles, such as crocodiles. However, we saw few explicit crocodile effigies. Topiary, or the art of clipping trees and shrubs to make living statues, is very popular in Thailand, and some were so complex that they represented flying birds and rearing elephants. However, we saw only one living statue of a crocodile, and that was in the dividing strip of a busy road in the middle of Bangkok. Among the thousands of statues and carved reliefs in the walls of temples, we encountered only one crocodile. It was about 1.5 m long and carved into the wall beside one of the landings on a staircase that led to a temple. Although impressive, it was dwarfed by the glossy jade-colored ceramic scales of the dragon that accompanied the stairs for over 100 m. Crocodiles had obviously not been dominant features in Thai traditional culture.

There was a strange contrast between the open and friendly Thais, who made you feel instantly welcome, and the millennial culture that would obviously take many decades to start to understand. We spent many hours strolling through the food markets trying to imagine how the thousands of types of fruits, vegetables and animals could be combined into the delicious Thai food. We even spent half

a day in a cooking class, but that only got us into the most basic cuisine. The variety in the markets was astounding. Every stall appeared to have a different combination of colors, shapes and fragrances. I took hundreds of photographs because every display was a work of art. I am sure that the people who ran the stalls did not earn very much money by our standards, but that did not stop them from devoting time to make their little patch of the market spotlessly clean and aesthetically pleasing.



Photo 18.1 A crocodile motif beside a stairway to a temple in Thailand.
Photo by Bill Magnusson.

We travelled to the most famous tourist spots, and spent time in Chiang Mai during Songkran, the Thai equivalent of New Year's Eve. Originally, the Bhudist monks had sprinkled water on the faithful in a staid ceremony, but modern Thais now drive through the streets in pickup trucks with 200 litre drums of water spraying everybody in sight. Tourists run around with water

guns, and the major hotels have an attendant at the door with towels so that you can dry off before entering the hotel after venturing onto the streets to see the parades. It was a lot of fun.

We also went to an elephant park, where we could ride on the elephants, watch them loading logs in an arena, and even see them painting quite complex scenes with their trunks. It was easy to see why elephants were so revered in Thailand. Before the industrial age, they had been the principle heavy machinery for Thai society, which until comparatively recently was far in advance of anything in Europe. However, we saw no wild elephants. To see those, or any other truly wild animals we would have had to travel into the forest near the border with Myanmar, which would have taken too much time, as well as being dangerous due to military tensions between the two countries.

The beautiful temples, organized markets, and tourist parks are obviously not the only elements of Thai society. We were warned not to walk around some areas of Bangkok, and some aspects of the law seemed repressive. You could be jailed for criticizing the king or a member of the royal family. Once, when we were travelling around a temple complex in a horse-drawn surrey, the guide made an unexpected stop and took us into the garden of a suburban house. Half a dozen young men were standing around table on which stood an impressive cockerel. The ancestors of domestic chickens were native to Thailand and other regions close by, and this cock showed his wild ancestry by his glistening feathers and defiant stare.

The men were interested in the bird because it was a prize fighter that they said was worth about US\$ 10,000. I was pretty sure that cock fighting was illegal, and that those men did not gain their earnings by any legal means. They did not seem at all concerned, however, and invited me to stand among them beside the cockerel while the guide took a photo. I still have the photo, but I

would not post it on the web because I could imagine being taken aside the next time I pass through US immigration and an agent asking “What is your relationship with these men?” How do you explain that you were befriended by a group of cocking fighting mobsters on a temple tour?

Although I was fascinated by the Thai culture, and how they incorporated animals and plants into their lives both physically and spiritually, I wanted to see more natural landscapes. I was also getting a little stressed out by continually being surrounded by hordes of people. Therefore, one day when Albertina decided to investigate one more market and have one more Thai massage, I took a hiking tour through the forest to visit a village of one of the hill tribes.

I did the walking tour with two young American tourists. One of them chattered continually about her life in suburban USA and her college course. The other did not talk as much, but she only looked away from her feet when the guide stopped and pointed something out. It seemed strange to me to go into the wilds of Thailand and spend all your time talking about the USA, but I remembered the aboriginal hunters I had worked with who could stand chatting in the boat without missing anything that passed by on the bank. I wondered if these tourists had that ability and I was just judging them by my limited capabilities. In any case, the continual nattering got on my nerves and I walked well back or well forward of my companions, which meant that I missed a lot of the things that the guide said.

I was disappointed by the tour. The “forest” turned out to be mainly bamboo regrowth and degraded farm land. The hill tribes were not the original inhabitants of the area that I had expected, but recent immigrants from China who had colonized the forest on the steep slopes about 80 years before because the best arable land was already occupied by the Thais. I walked down the steep

roads and looked at the fields of pineapples and bamboo, interspersed occasionally by low regrowth forest or isolated giant forest trees draped in orchids and other epiphytes that no longer formed part of a viable ecosystem, and were just waiting their turn for the axe. Trucks laden with cabbages rumbled past, carrying the life of the hills away to the bustling cities. Not only did I not see any old-growth forest, I did not meet anyone from a traditional culture who had seen it.



The CSG conference was held at Mahidol University in Bangkok. Like everywhere else in Thailand, the university was well organized and aesthetically pleasing. The lakes and canals throughout the campus were populated by many species of waterbirds, and giant monitor lizards stalked across the lawns. I was surprised at the number of people concerned with crocodile conservation, not only in Thailand, but in the neighbouring countries, such as Laos, Cambodia and Vietnam. In most areas, poverty, lack of educational opportunities, and previous attempts at domination by colonial powers had led to terrible wars, and made conservation difficult, and not usually a priority for politicians. Nevertheless, these people continued to spend their time, and often to risk their lives, to save crocodiles. Most of the conservation activities were associated with economic exploitation of crocodiles, because the local people generally had to be concerned with the survival of their own children, and only after that was assured could they devote time to crocodile conservation.

I learned a lot at the meeting, and enjoyed catching up with CSG members, some of whom I had seen at the CSG meeting in Manaus in 2010, but many of which I had not encountered in over a decade. I felt a little out of place, however, because this was a regional meeting and I didn't have much to

contribute that would be useful to local crocodilian biologists. Nevertheless, I made some suggestions as to how the CSG web site could be made more user friendly, and they were adopted, so maybe I did contribute something, even if only indirectly.

It was the field trip after the meeting that I most wanted to participate in. I had seen that the Thai lowlands were mainly devoted to rice paddys, and there was little free water for crocodiles. Even the canals that irrigated the fields were fenced off in sections for fish culture. There are far too many people in Thailand to support with conventional livestock, and most of the protein consumed comes from fish or crustaceans raised in association with irrigation canals.

We were taken to an impressive crocodile-conservation breeding facility, and strolled along steel walkways over large naturalistic ponds in which Siamese crocodiles bred. Their nests looked like those of saltwater crocodiles. In fact, I could see nothing to distinguish the Siamese from the saltwater crocodiles, except perhaps their size; the Siamese crocodiles were slightly smaller. The Thais said that Siamese crocodiles are docile and never attack people. In fact, most of the crocodiles on the farms are hybrids between saltwater crocodiles and Siamese crocodiles, because the farmers wanted the high value of the hide of saltwater crocodiles mixed with the docility of the Siamese species. Although the Thais said that there would be no danger in reintroducing Siamese crocodiles into areas with people, I was less sure. My experience with black caimans made me wary of mixing even docile species of large crocodilians with high densities of people. I asked Grahame Webb what he thought, and he replied “You wouldn’t get me in the water with those crocodiles.”

The fact that the Thai farmers had hybridized the two species of crocodiles, and then passed breed stock to other countries, such as Cambodia, worried me. If the conservation were to be based on captive breeding, it should be based on

pure lines of each species. Hybrids could look like either parental species, so expensive genetic analyses were necessary to determine whether farm raised animals could be released without endangering the genetic integrity of any Siamese crocodiles that might still occur in the wild. However, the Thais said that was not a problem, because there were no wild crocodiles left in Thailand.



Photo 18.2 *A captive Siamese crocodile. Photo by Bill Magnusson.*

After the breeding facility, we went to a huge lake where the researchers associated with the university intended to release Siamese crocodiles, once they had the results of the genetic analyses to determine which captive-bred animals were genetically pure. Having pure stock was not only a question of conservation concern. Saltwater crocodiles are man eaters, and having just one child eaten could undo years of conservation education.

The lake in fact was a huge dam that provided an aquatic landscape that stretched to the horizon. The research station had an aquarium with live examples of the fish from the lake. There were more than fifty species just in that one lake, a diversity that was not more impressive than that in Amazonian lakes, but which made the Australian freshwater fish community look miniscule. As I walked around the aquarium, I marveled that the fish survived intensive fishing, but the crocodiles had been wiped out.

We travelled onto the lake in two large flat-bottomed boats, each of which took a dozen people. The boat was powered by an air cooled motor with a propeller on a long shaft that stuck straight out behind the boat. Motors with a similar design are often used in the Amazon to power canoes because the motor can be light, placed slightly forward of stern, and the shaft can be lifted if the water becomes too shallow, or choked by aquatic vegetation. In fact, the water does not have to be deeper than the diameter of the propeller. The Thai boats, however, had automobile motors powering the drive shafts. The system was noisy and looked ungainly, but the boats moved along at a good speed, despite the large burden of crocodile biologists.

The banks of the lake were lined by floating grass mats, with occasional stands of trees that served as roosts for herons, cormorants, and other fish-eating birds. In the middle of the lake, huge areas covered by lotuses and other lilies were dotted by the pointed ends of rustic fish traps. Bright pink eggs of snails, similar to those I had seen in Brazil, hung from the plants and the traps. This was a different world from the closely tended rice paddys around Bangkok. I could not imagine the effort that would be needed to exterminate a marsh crocodile from the hundreds, or perhaps thousands, of square kilometers of aquatic vegetation.

One of the Thai speaking participants asked the fisherman who drove the boat if he had ever seen a crocodile on the lake. He replied that you could see 10 or 20 crocodiles within a few hours if you went out at night. It seemed incredible that the researchers planning to release captive bred crocodiles did not know that there were still crocodiles there. Releasing captive bred crocodiles in that situation could be a disaster. They could transmit diseases to the wild crocodiles, and if they were hybrids they could dilute the genetic pool. Worse still, if someone were attacked by a crocodile in the future, the local people would not consider it an act of the Gods; they would blame the scientists.



Photo 18.3 A field trip to see crocodile habitat in Thailand with CSG members.
Photo by Bill Magnusson.

I appreciate the good intentions of the researchers, mainly veterinarians, who want to save the Siamese crocodiles based on farm raised animals. Nevertheless, I think that experienced field biologists should survey the waterways of Thailand

before any releases are permitted. The animals that the fishermen see may even be hybrids that escaped from a crocodile farm. I did not visit a commercial crocodile farm while I was in Thailand, though most have tourist outlets. I get depressed at seeing captive crocodilians when most other people are quite unmoved, but, when I checked the TripAdvisor rating for Thailand's most famous crocodile farm in 2014, I found that only 25% rated it as excellent, and 36% rated it as horrible. I suspect that I would have been depressed. Heavy rainfall at the end of 2011 led to flooding of many crocodile farms around Bangkok, and the escape of many crocodiles, most of which were probably hybrids. Newspapers reported that a man was attacked by one of those crocodiles, but I don't know whether it was an unprovoked attack or the man was trying to catch it.

I came away from Thailand less convinced that farming crocodiles is an important conservation tool. It may be in theory, but if the Thais, who have been successfully farming crocodiles for over 50 years are unable to show that it has positive conservation effects, and have documented negative effects, such as genetic degradation of an endangered species, perhaps it should be approached with much more caution. Maybe, if the Chinese immigrants hadn't started farming crocodiles in the 1950s, some Thai field biologist would have invested in the conservation of the species in the wild, as happened in so many other countries during the same half century, and the Siamese crocodile would be much better conserved, or at least we would know its true conservation status. I hope that the Siamese crocodile is looking after itself as well as most other swamp crocodilians, and that one day we will find out that it didn't really need the well-meaning veterinarians.