

Of Snakes and Zoos: The Life of Hans Boos

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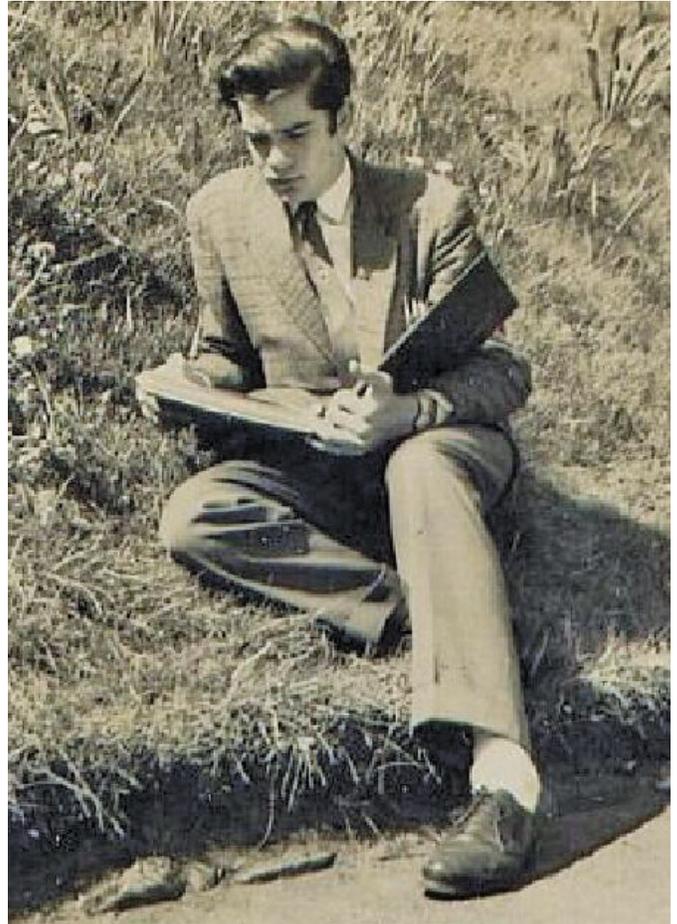
Hans Boos E.A. is a long-time member and past president of the Trinidad and Tobago Field Naturalists' Club, and author of the definitive work on the snakes of Trinidad & Tobago (Boos 2001). His younger brother Julius (1946-2010) was also a noted naturalist. The following biographical article is mostly drawn from an interview conducted in Trinidad in July 2011, transcribed by Jo-Anne Sewlal and Enid Nobbee. The full interview is archived at the University of the West Indies.

Hans was born in 1939 at the onset of WWII. His father, a self-taught amateur botanist, often took him into the savanna near their house in Port of Spain, where Hans got his first interest in natural history at a very young age. Finding the King Swallowtail butterfly (*Papilio thoas*) laying its eggs on a Bois Chandelle (*Piper* sp.) bush, they brought the caterpillars home and fed them leaves. They were able to watch the caterpillars grow, pupate and emerge as butterflies. They also brought home caterpillars of the Orange Dog butterfly (*Papilio cresphontes*), which feed on citrus, to follow their metamorphosis.

There was always a naturalist component in their lives. In the ponds in the savanna were tadpoles of the giant toad (*Bufo marinus*). They would keep them in a bottle and observe their metamorphosis. And then they began keeping fish, mainly guppies (*Poecilia reticulata*). There might be a tortoise in the bathroom or a squirrel in a cage, and they always had birds. Their mother became a sort of local veterinarian for sick or wounded animals. People would bring them to her, and she would dress their wounds. Hans went fishing with his father and uncles, sometimes for an entire weekend, and so became familiar with many kinds of marine fish.

In roaming about an old coconut estate, Hans and his brother became aware of *Anolis* and *Polychrus* lizards. To their later regret, they read a book that explained how to make blow guns and blow darts. Lizards, as the natural targets, suffered a great many losses in this way, although their father strictly forbade them ever to shoot a bird. Their life was very bush-oriented, and for the first time snakes came into Hans's life. He was able to keep them in cages and watch them feed, a rather gripping thing to watch.

After secondary school, the question of further education arose. It seemed natural that he would become a veterinarian, and it was decided that he would study in Edinburgh. His father's company provided a paid vacation



Hans Boos as a student in Edinburgh, shortly before returning to Trinidad.

to Britain every three years. The family went by boat to Bristol, then drove to London, visited the London Zoo, and drove on to Edinburgh over a period of a week.

It soon became very plain that he lacked the qualifications to enter university. At the age of 19, he had to go back to school with 14 and 15 year-olds, while on his own in a strange city. He buckled down to give it a try. However, by the time he had completed Zoology and French, he realized that it would require an additional seven years to qualify as a veterinarian, while his father was close to retirement and would not be able to afford the tuition fees. After two years he gave it up and went home.

Back in Trinidad in 1960, he got a job at Standard Oil. He married Shirley Brash and they had two children, Phillip Anthony and Catherine Marie.

At the national museum he met herpetologist Ludolph Wehekind (1895-1964) and bat specialist Arthur M. Greenhall (1911-1998). Wehekind gave access to his library. He was getting a little too old for fieldwork and saw Hans as someone with the ability and motivation to undertake some of the studies that he (Wehekind) no longer could. Among other things, there were several species of snakes from Trinidad that he had not yet seen. In this situation, Wehekind was only too happy to encourage and mentor Hans as a young amateur herpetologist.

In this period he started to keep snakes in a more serious way. Learning from Wehekind's footsteps, he began drawing and keeping notes on what and how often they ate, how often they shed their skin, and their breeding. His first significant original observation was that certain snakes will often engulf their prey without first killing it, so that one could see the prey struggling as it went down. Tree boas, he found, store food in their coils if they have more prey than they can eat at once.

In the ponds he caught frogs, *Mannophryne trinitatis*, to feed his snakes. One day he found a population of thousands of tiny *Bufo* about the same size as the *Mannophryne*. This seemed like a handy source, but would the snakes eat them? He put both *Mannophryne* and *Bufo* toads into a cage with *Liophis* and *Leptodeira* snakes, which went into a feeding frenzy. However, as soon as one caught a *Bufo* it spat it out and began rubbing its mouth against the substrate. There was evidently a sense of taste or smell in the mucosa of the snake's mouth.

In time, his snake-keeping habits became unpopular with the neighbours, so the family moved to a new house where he built a reptile house to accommodate 36 cages and began importing foreign snakes, especially boas and pythons. He had joined the Zoological Society of Trinidad and Tobago and became a member of the council around 1963. At about the same time, he began corresponding with leading specialists, including Ernest E. Williams (1914-1998) of Harvard University.

Very soon after returning from Edinburgh, Hans joined the Trinidad and Tobago Field Naturalists' Club, of which he soon became a leading stalwart. In 2012 he was elected to the rarified group of honorary members. The Club was a very active organization. After it had made a number of field trips to the Bocas Islands in the strait between northern Trinidad and Venezuela's Paria Peninsula, some members proposed that they should look at each island in turn, studying a variety of aspects in a more systematic fashion. Out of this, several members published accounts of the islands within their areas of expertise. Hans treated the reptiles of the Bocas Islands and other small fringing islands.

The Club took a leading role in efforts to study and protect sea turtles, especially the leatherback turtle (*Dermochelys coriacea*). Archie Carr (1909-1987) came from Florida, gave them tagging tools, and they began searching the nesting beaches at night. The Club also agitated against the government's acquiescence in the Shell Oil Company regularly moving barges through the Caroni Swamp, as the wash was disturbing the Scarlet Ibis (*Eudocimus ruber*) which had stopped nesting there.

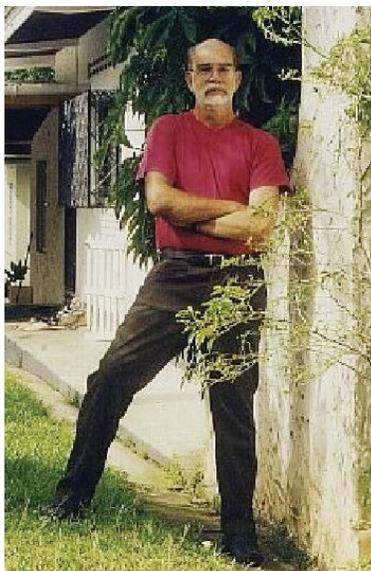
After a few years as an accountant at Standard Oil, Hans found that he had no further room for advancement. It was time for a change, and he wanted to do something in natural history. Looking for a promising English-speaking place, he settled on Australia. It was certainly a country of great interest to a naturalist, and Australia had assisted passage for approved immigrants, so in 1968 the family took a ship to Sydney. As it happened, the local Taronga Park Zoo had an opening for a trainee keeper, so Hans had a job right away. He was well prepared, having studied Australian reptiles for years.

Among his successes during this early period as a zookeeper was the first captive breeding of three Australian pythons. He began publishing his results, sending the breeding data to the *International Zoo Yearbook*, as well as two popular articles to *Animals* magazine. One was on the Tobago-endemic lizard *Gonatodes ocellatus* and the other on three colour variants of *Bothrops* snakes from Central America.

The zoo had a special enclosure for Galápagos tortoises (*Chelonoidis nigra*). Hans had never seen one of these in life before, yet something did not look right. There seemed to be two different kinds of tortoises and, by reference to Pritchard's (1967) book, he determined that half of them were not Galápagos but Aldabras (*Aldabrachelys gigantea*). The two species look quite similar to humans and, apparently, to each other, leading to fruitless interspecific mating when kept together. Hans separated the two groups, improved their living conditions and soon after he left Australia, Aldabra tortoises bred successfully in captivity for the first time.

The marriage was not flourishing and Shirley and the children returned to Trinidad. Hans stayed in Australia another two years during which time he advanced to Zookeeper III and at times was effectively the supervisor of reptiles, but then he reached an impasse. After four and a half years, he could go no higher without a degree although he had been studying at night with Australia's leading herpetologist, Harold Cogger.

In the meantime, the curator of the Emperor Valley Zoo had died. With his years of zoo experience and in business, Hans applied. It took the selection committee



Hans Boos at home in Trinidad.

so long to act that Julius protested to the prime minister, Eric Williams, that they had a very well-qualified candidate in his brother, but were dragging their feet. Through Williams's intervention, Hans was appointed.

He had a month to report for duty, with funding to tour zoos along the way. Together with Martha McMahon, who would become his second wife, he island-hopped from Sydney to Fiji and Hawaii and then to San Francisco and various other American cities, visiting major zoos along the way. As the new curator in Trinidad, he received the VIP treatment at every zoo he visited.

In 1973, the Emperor Valley Zoo had been directionless since the previous curator's death two years earlier, and it showed. There were no paved pathways and almost no fences, no water supply or drainage, no preparation room for the animals' food. Furthermore, the zoo was very short-staffed and had poor work practices. Worst of all, there were few animals, some of which had been ill-advisedly acquired.

Surveying the situation, Hans had to wonder if he had made a mistake in seeking the job. Still, he set to trying to sort out the physical plant, work plan and staff problems, before attending to improving the zoo's set of animals. Among the infrastructural improvements were drainage for the entire zoo, the pathways and roads that exist today, a complete perimeter fence, a complete kitchen with freezers, and underground storage for 64,000 gallons of water.

In this he had the advantage of public goodwill, including fairly generous financial assistance from the

government. There was also help from the private sector. Petitioning local businesses, the zoo received 100 hollow clay bricks from a hardware store, for example, while other merchants contributed such things as rolls of wire and a lawnmower.

Using the Hawaii Zoo as a model, Hans set out to design a specifically tropical zoo with an emphasis on Neotropical animals, supplemented with others from elsewhere for comparison or because they were charismatic and did well in captivity. Some species turned out to be unsuitable for this latter reason. The zoo made a number of attempts to keep Silky Anteaters (*Cyclopes didactylus*), for example, but they would not eat properly.

Hans was building an international reputation which aided in acquiring new animals by exchange or gift. Among others were three chimpanzees through his good relationship with Metro Toronto Zoo and ostriches from the Oklahoma Zoo. He also began making trips to Suriname where, for example, he arranged to get a pair of jaguars and several capybaras (*Hydrochoerus hydrochaeris*) in exchange for surplus. At the same time, they were divesting species that did poorly or were more trouble than they were worth, such as bison and red deer.

The zoo also began to breed some species, either for release into the wild or to enlarge and improve its holdings. As an example, its green monkeys (*Chlorocebus sabaues*) were all from a single (introduced) population in Barbados and showed the effects of inbreeding. This was rectified by introducing new breeding stock from other populations.

Hans Boos's main literary output to date is his snake book (Boos 2001). He began work on it in 1973, gradually compiling notes, photos and references, and then earnestly got to work on it in 1993.

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