

HISTORICAL PERSPECTIVES

Copeia, 2004(1), pp. 184–189

PAULO EMÍLIO VANZOLINI

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PAULO Emílio Vanzolini, retired Director of the Museu de Zoologia, Universidade de São Paulo, was born in São Paulo on 25 April 1924 (his official birth record is dated 1923, however) to Carlos Alberto and Finoca Giudice Vanzolini. His father, an engineer and professor at the University of São Paulo, was very conventional—life's rules were clear and to be followed. His mother was a homemaker. Vanzolini, known as Vanzo to his scientific colleagues, once told me that, when he was a young man, he wanted to legally change his last name to Vanzo, but when he raised the subject with his father, his father protested that the honor of the family name would be lessened. Hence, Vanzo dropped the idea.

Vanzo is the oldest child. His brother Claudio Eugênio Vanzolini is an engineer, and his youngest sibling, a sister Maria Alice Silva da Leme, is a retired professor of psychology, University of São Paulo. With his wife Ilse Vanzolini, he has five children: Maria Eugênia, a psychologist, who is married and has three daughters, one of whom is the mother of his one great grandchild; Mariana, an anthropology museum conservation technician; Maria Emilia, a geography teacher with four children; Fernanda, a lawyer with two children; and his son, Antonio Pedro, a film director and cinematic art director. His first son, José Henrique, tragically died from an automobile accident when he was 11 years old.

Vanzo came from a family of intellectuals. The term intellectual in this case does not translate well from Brazilian (Vanzo bristles every time the anglicized spelling “Brazil” is used for his country's name) Portuguese to English, especially to American English. Vanzo's great grandfather, Giuliano Vanzolini, translated and published “*De rerum natura*” by Lucretius, from Latin verse to Italian verse in 1879. His grandfather, G. Franco Grillo, sent scientific specimens from southern Brasil to Giacomo Doria at the natural history museum in Genoa and Boulenger, working on specimens from the Genoa collection, named an anguid lizard for him, *Ophiodes grilli* (which Vanzo, with no enjoy-

ment, had to synonymize in one of his first papers, 1948, *Revista Brasileira de Biologia*, 8:377–400). During his parent's era and his own university days, the students and faculty comprised a small community and were conversant with all disciplines. Vanzo's colleagues included not only biologists, but artists, composers, writers, etc. Vanzo once told me that he learned English to read Shakespeare's plays in the language in which they were written. He always took along either Shakespeare's complete works or Plutarch's *Lives* on each of his Amazonian boat trips. I finally read all of Shakespeare for the first time on a Rio Purus expedition with Vanzo. Vanzo's father encouraged Vanzo's participation in this dynamic university community, and he strongly supported Vanzo's goal of becoming a scientist.

Vanzo hated school at all levels. In the Brazilian educational system, there are a series of exams that must be passed to continue in an academic program. Vanzo's father wished him to pass these exams at the highest level. He was very concerned that Vanzo would not do so because Vanzo disliked school so much and was not interested in memorizing the materials needed to pass the exams. One of these key exams occurred when Vanzo was 10 years old. His father told him that if he passed the exam at the highest level, he would receive a bicycle. The incentive program worked, and Vanzo earned the bicycle. He cycled to the Instituto Butantan, which was located in the neighborhood where he lived. He was enthralled by the snake pits at Butantan and immediately decided that he wished to work on snakes as a scientist. Three times each week, Mondays, Wednesdays, and Fridays, crates of live snakes would come to Butantan by rail from all over Brasil to be processed for antivenin production. Vanzo rode his bike to Butantan to watch the snake keepers open the crates, lift out the snakes, name each one, and identify in which pit to place it. He watched and listened and learned the species involved, which, of course, were primarily poisonous snakes. Vanzo maintained his own col-



Fig. 1. Staff of the Museu de Zoologia, São Paulo (photo taken sometime from 1959–1962). Left to right, standing: Helio Ferraz de Almeida Camargo (ornithologist), Eurico Alves de Camargo (ornithologist), Messias Carrera (entomologist), Carlos Otaviano da Cunha Vieira (mammalogist), Lauro Travassos Filho (parasitic entomologist), Werner Carlos Augusto Bokermann (taxidermist, amphibian technician); seated: P. E. Vanzolini, Lindolpho Rocha Guimarães (Director, entomologist), Carlos Amadeu de Camargo Andrade.

lection of live snakes at his house with his parents' encouragement. His shift from a primary interest in poisonous snakes to Amazonian lizards was caused by two events. In the early 1940's, his father gave him a present of a ticket to Belém. Vanzo visited the Museu Goeldi and was put in contact with a group of professional butterfly collectors who were embarking on a collecting trip, and they invited him to accompany them. He accepted, and this first taste of the Amazon whetted his appetite to do serious fieldwork in Amazonia. When Vanzo started in his museum position, he had to identify most of the 1200 specimens in the herpetology collection. He used Boulenger's catalogs to identify the specimens and fell in love with the lizards.

When Vanzo was finishing the equivalent of high school, he asked his father's advice on how to train to become a scientist specializing in herpetology. His father, in turn, asked the advice of his colleague, Dr. André Dreyfus, a geneticist and a disciple of Dobzhansky, who was then Director of the Faculty of Sciences at the University of São Paulo. Dr. Dreyfus suggested avoiding the zoology program at the University of São Paulo because the professor and his staff were all invertebrate specialists and did not believe in evolution. Vanzo would not learn about vertebrate zoology from them. At the time, the university was strictly patterned after the European system, where the full professor made all other appointments and the positions were served at

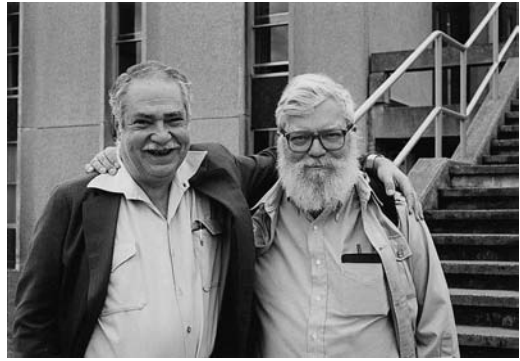


Fig. 2. P. E. Vanzolini and A. Stanley Rand at the First World Congress of Herpetology, Canterbury, 19 September 1989.

the pleasure of the professor. When the professor retired, all his employees were let go so that the new professor could appoint his or her choices. Space does not allow discussion of Vanzo's role in changing the University of São Paulo from the European to the American system. Dr. Dreyfus indicated that the university medical school was excellent and that by going through medical school, Vanzo would learn vertebrate biology. He should then go to Europe or to the United States for a Ph.D. Vanzo followed this advice and took the two-year pre-med program and six years of medical school, graduating with a medical degree from the University of São Paulo.

Vanzo was called up for military service in 1944–1945. All of his fellow students went to Officer's Training School. Vanzo thought it important to serve in the ranks and reached the level of Corporal in the horse-mounted cavalry of the Brazilian army.

Vanzo believed the American university system, where tenured professors were hired in many fields of specialization, provided a more thorough education than the European system. Therefore, he focused on applying to a university in the United States. He thought he knew all there was to know about evolution at the time and wanted to go somewhere to learn about reptile anatomy. He went to the library to find pertinent works and was impressed by Alfred Romer's thesis on the locomotor apparatus of primitive and mammal-like reptiles (1922, *Bulletin of the American Museum of Natural History* 46:517–606). He wrote Romer (per Vanzo) a very pretentious letter, full of himself, asking if he could be Romer's Ph.D. student at Harvard University. Vanzo has never understood why Romer consented but was and will be forever grateful to him for accepting him. Once at

Harvard, he completed his Ph.D. in January 1951 in only five semesters because his medical courses fulfilled almost all of Harvard's required courses. At Harvard, Vanzo interacted with and learned the most from Ernest E. Williams, Philip Jackson Darlington Jr., and fellow graduate students Bill Brown and Ed Wilson. Vanzo found the general atmosphere at Harvard stifling in that almost all of the students and faculty lived their entire lives centered on scientific activities in contrast to the more bohemian university environment he enjoyed in Brasil. Ernest Williams was a marked exception as someone who enjoyed eating good food, drinking good wine, and having broad cultural interests. They enjoyed each other's company, such as attending theatrical productions in Boston when their budgets allowed. Ernest was like an older brother to Vanzo while they were at Harvard together. Vanzo counts his friendship with Ernest as one of the most important in his life. He urged Ernest to retire in São Paulo but was unsuccessful in convincing him to do so.

Vanzo was appointed as a biologist at the Museu de Zoologia in November of 1946 after completing his military service. An advanced degree was not required for museum positions at that time. In 1946, the museum was part of the State of São Paulo Secretary of Agriculture, and Vanzo's appointment was part time, a normal situation for new hires. He was given a paid leave of absence from the museum to obtain his Ph.D. at Harvard as part of his training to become a curator at the Museu de Zoologia. He was a museum employee his entire professional career (Fig. 1). He obtained a full-time appointment and was appointed Director of the Museu de Zoologia in 1962 from which position he retired in 1993 at the mandatory retirement age of 70. Throughout his term as director, he was always involved with the day-to-day curation of the amphibian and reptile collections. He successfully argued to have the museum transferred from the State Secretary of Agriculture to the University of São Paulo in 1969 so that the museum would be part of the academic intellectual community and so that museum staff could be involved in higher educational activities. He served as major professor for 38 doctoral students at the University of São Paulo, several of them taking positions in the Museu de Zoologia (MZUSP).

Vanzo's curatorial philosophy has been guided by a statement Charles Bogert made to him in one of their early conversations: "Museum specimens should be where they are most useful." Vanzo's assessment of his greatest nonscientific professional accomplishment was serving

as director of the Museu de Zoologia for just over 30 consecutive years and maintaining good scientific standards in the museum during his tenure. I find another curatorial accomplishment, not mentioned during the interview, to be very significant and typical both of Vanzo's dedication and concern for collections. Werner C. A. Bokermann started his employment at the Museu de Zoologia as a taxidermist and janitor, the only job open at the time he came to the museum in search of a job (Fig. 1). Bokermann told Vanzo that he was interested in frogs and would like to work with the museum's frog collection. Vanzo encouraged Bokermann over several years by training him and encouraging and supporting him to finish high school so that he could then obtain a college degree. Vanzo and Bokermann had a serious falling-out shortly after Vanzo returned from Harvard and soon thereafter Bokermann was transferred to the São Paulo zoo as a bird curator. Bokermann amassed an incredible private amphibian collection through his own collecting efforts and an aggressive worldwide exchange program. Bokermann received some federal funding for his collection, so the collection legally had to remain in Brasil. Bokermann made it known that he would never place his collection in the MZUSP as long as Vanzo was alive, even though he recognized that the MZUSP collection was the best-curated collection in Brasil. After Bokermann died, Vanzo contacted Bokermann's widow and sons and arranged to purchase the collection for the MZUSP.

I was surprised at the amount of disorganization in Bokermann's collection when I first saw it after it had been moved to the MZUSP. Part of it was well-organized by individual species per jar; another part of it was all the specimens collected from an individual locality per jar; another part of it was packages of borrowed specimens returned to Bokermann that had never been opened and incorporated; and there were quite a few mystery jars. Even though Vanzo disliked Bokermann personally and does not like frogs (he says he has no taxonomic feel for them), he has spent much of the last seven years cataloging the Bokermann amphibian collection of just over 30,000 specimens. His processing of this collection was very much a hands-on operation, including personally producing all jar labels, which has been true throughout his museum career. It is typical of Vanzo to undertake such a daunting, time-consuming task that has no direct benefit to his personal scientific pursuits. The truth is, however, that Vanzo is the only person in the world who could have made sense of much of the Boker-

mann collection. Bokermann was a “complicated person,” the very term Bokermann used to describe Vanzo in my conversations with Bokermann. To organize and catalog the collection, someone had to understand Bokermann as a person and have an intimate knowledge of Neotropical, especially Brazilian, localities. Vanzo is the only person with these two sets of knowledge.

Vanzo’s entire professional life as a zoologist has been with the Museu de Zoologia, but he had two very different professional experiences along the way. When he returned from Harvard with his Ph.D. in hand, he was still a part-time employee and had some debts from his graduate student years. He told his father he would have to find another job to supplement his part-time museum position. His father offered him a monthly stipend so he could concentrate full-time on his museum work. However, soon after, his father was diagnosed with cancer. For 14 months until his father’s death, Vanzo was without his father’s stipend and could not take on extra work because he was attending to his father. Vanzo had considerable debts after his father’s death. He was asked by a São Paulo television station to produce a weekly variety show, and he did so from 1953–1954 to pay off his debts.

In 1959, one of Vanzo’s friends was appointed Secretary of Agriculture for the State of São Paulo by the newly elected Governor. For the next four years, Vanzo served as a cabinet advisor to the Secretary of Agriculture. Vanzo was given the assignment of writing the legislation for the Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP), the State of São Paulo research foundation. Although FAPESP had been created by a previous administration, the organizational structure had not been put into law. The new administration wished to place FAPESP on firm footing during its tenure. Vanzo had received three Guggenheim fellowships and became friends with Henry Allan Moe, the Secretary of the Guggenheim Foundation. Vanzo asked Moe’s advice for setting up the organization of FAPESP. Moe’s views provided the basic framework for the legislation that Vanzo crafted and that was enacted. The funding for FAPESP was organized to be not less than 0.5% of the state sales tax. This has since been raised to 1%. Because the funding is based on the sales tax, it is inflation-resistant. FAPESP has been one of the most important funding agencies for basic research in Brazil, often exceeding the level of research support provided by the federal government.

Vanzo did not mention the Brazilian Academy

of Sciences during the interview. I know that the Academy played an important part in his life especially during the years when his good friend, Aristides Pacheco Leão, was its President. Vanzo was elected a member of the academy in 1963.

The herpetologist that served as Vanzo’s ideal before coming to the United States was Chuck Bogert. When Vanzo arrived in New York, on his way to Harvard, he took his wife and luggage by taxi to the hotel, registered, then took the same taxi to the American Museum of Natural History so that he could meet Bogert. Not only did he meet Bogert that day, but Ernest Williams was there also. Bogert and Vanzo hit it off well and kept in touch throughout Bogert’s life. Vanzo accompanied Bogert to Mexico one summer when Bogert was making field recordings of Mexican folksongs for Folkways Recordings. Vanzo recounted one particularly memorable occurrence. One day in Chihuahua, several cowboys rode up to Bogert and Vanzo. The cowboys thought Vanzo’s Spanish accent indicated he was from southern Mexico and they spoke to him as a fellow Mexican. Bogert stood silent with an absent look on his face, playing the dumb American. The charros asked Vanzo to get some money from his boss and to come with them to have a drink or two. They also made some pointed comments about Vanzo’s “gringo boss.” While this discussion was going on, an indigenous man and boy walked up and spoke to the cowboys in their native language. The charros did not understand what they were saying. Bogert then spoke to the man in his language and told Vanzo (in Spanish) that the man was a Chapala Indian, 600 miles from home. He was taking this journey to show his son the world and he did not know how to reach their next destination. Bogert gave him the information. The cowboys, after witnessing this interaction, quickly told Vanzo that they had to be on their way. They had suddenly realized that Bogert not only understood the Indian man, he understood every word they had said, as well.

K. P. Schmidt and E. R. Dunn, among several U.S. herpetologists, were generous with providing information and literature to Vanzo. He remarks that he admires the generosity of Americans in general and herpetologists in particular.

Brasilian scientists that Vanzo ranks as having had the greatest impact on Brazilian herpetology were first and foremost Alipio Miranda-Ribeiro, followed by Adolfo Lutz, a public health professional, whose interest in frogs was spurred by his belief that tadpoles might be an intermediary host for schistosomiasis. Bertha Lutz was trained as a botanist whose main interest in

frogs was defending her father's taxonomic frog contributions. Antenor Leitão de Carvalho was an honest, careful worker on frogs and was a wonderful person.

Once Vanzo returned to Brasil from Harvard, he had a very firm idea of exactly what line of research he wanted to pursue. A vignette best illustrates the nature of his research program. When he was finishing his Ph.D. in the United States, Henry Miller of the Rockefeller Foundation asked Vanzo to come to New York to meet with him. Miller told Vanzo that he was the Rockefeller person for South America. He had a close association with the University of São Paulo, considered himself an honorary Paulista (person from São Paulo), and liked to keep an eye on promising Brazilian scientists at the beginning of their careers. He asked Vanzo what kind of research program he wanted to pursue that the Rockefeller Foundation might help fund.

Vanzo told him he wanted to undertake a research program in which it would be an advantage to be a Brazilian. He wanted to carry out a broad research program on reptiles, particularly lizards, throughout the Brazilian Amazon. What he needed to do was sample along the major Amazonian rivers. To do that, he needed access to boats and money for books, collecting supplies, and bottles and alcohol to maintain the collections he obtained. Miller told him, "Do something more intellectual—do something fashionable." Vanzo replied that he was not interested in being fashionable. Miller asked Vanzo to at least visit a modern laboratory that the Rockefeller Foundation supported to see if there wasn't some way for Vanzo to make use of Rockefeller support. Vanzo accepted Miller's invitation and went to visit José Cei's lab in Mendoza, Argentina, where immunological techniques, the then current bandwagon technique, were being used. Vanzo enjoyed the Argentinean wine but, of course, was unconvinced that he should modify his research program. Needless to say, Vanzo had to find research support for his Amazonian work from sources other than the Rockefeller Foundation.

Most herpetologists would probably think that Vanzo would consider his greatest research accomplishment to be the role he played in developing the forest refuge model of speciation to account for the high species diversity in Amazonia. This is not at all the case. He considers his most significant research contribution to be his body of systematic work. He states that he is a "thick-tailed, dirty-fingernailed systematist" and proud to be so. He also thinks it important to produce useful publications, among which

are his incredibly useful two-volume set, "An annotated bibliography of the land and freshwater reptiles of South America (1758–1975)," which even dedicated frog workers such as myself go running to as the first, and typically last, place to find clarifications of citations and pithy characterizations of the literature. Since retirement, Vanzo has continued going to the Museu de Zoologia six days each week to work on the collections and his research, just as he did throughout his preretirement years.

Vanzo sees the major changes in herpetology from his early days to the present as globalization, molecular technique applications to biological problems, and computers. The computers are a mixed blessing; for example, most individuals who use PAUP don't understand what it is really about. The most important problem facing herpetology today is the proper organization, maintenance, and growth of museum collections, structured by scientists, not collection managers.

Vanzo's association with the ASIH has been very important and meaningful to him. He became an ASIH member in 1949, the year that the annual meeting was held at the then U.S. National Museum in Washington, DC. He said attending that meeting was very important to his career, as he met all of the important herpetologists of the time and became friends with many of them. One of the most pleasant surprises in his life was when he was elected as an Honorary Fellow of the ASIH. He admires the ASIH as a good example of a U.S.-based scientific society that is very stable in quality and vigor. He noted that the leadership serves the society—the individual leaders do not serve out of a sense of self-aggrandizement. European and U.S. herpetological editors have become too heavy-handed in Vanzo's opinion. He strongly supports peer review but was particularly irked when a *Copeia* editor excised from his obituary of Ernest E. Williams, without Vanzo's knowledge, his relating how George Gaylord Simpson forced Williams, out of petty jealousy, to remove the most innovative part of his dissertation before he would approve it.

Outside of Brasil, Vanzo is known as a scientist. Inside Brasil, Vanzo is a celebrity for another activity that has been important in his life. He has composed some of the best-known, now classic, sambas in Brazilian music. He started this activity when he was a university student. A group of students organized a variety show that traveled to various cities in the interior of the State of São Paulo. Vanzo was the master of ceremonies for the shows. The musicians were fantastic players, and the poet in Vanzo started

composing sambas for the musicians to play. He composed his first samba in 1942. Vanzo was involved with creating a four-CD set of 55 sambas (all but one) he has composed that was distributed in early 2003, with sponsorship from Petrobras. For this retrospective, Vanzo selected the singers and musicians for each samba, knowing that they would best interpret the samba involved. He is very pleased with the CD set, which includes illustrations by one of his doctoral students and recently retired entomology curator at the Museu de Zoologia, Francisca Carolina do Val. Vanzo kept his music royalties in cash in his desk drawer in his museum office and dipped into them to purchase herpetology publications and to fund needs within the museum. When Stan Rand was hired by the Museu de Zoologia after getting his Ph.D., he discovered months after he started working that his salary had been coming out of that drawer (Fig. 2). It took a year for the Brazilian bureaucracy to begin paying him, and Vanzo's "Volta por Cima" fund filled the gap without fanfare.

For many years, there were two parts to Vanzo's day. At 0730 h, a driver would pick him up from his residence to take him to the museum where he would work on research and collections. After lunch, he would take care of museum administration functions and return to herpetology. At night, he would then visit a night club or two to enjoy listening to popular Brazilian music. While he was in the U.S. as a student, whenever he was in New York, he would

visit the Village Vanguard, where he met Josh White and Pete Seeger and the Weavers. He still sings refrains from some of the songs he learned while listening to them. Perhaps as a way of maintaining some organization in the distinct phases of his life interests, he is known by different names: Vanzo to scientific colleagues, Paulinho to fellow musicians and composers, and Paulo to everyone else. One of my most pleasant memories in Brasil was when I was with Vanzo on a trip where we spent a night in Aracajú, Sergipe. We had dinner at a beach restaurant. Just as we finished eating, a group of 3–4 local musicians were passing by and recognized Paulinho. They came in to say hello and wound up playing several of his sambas with everyone in the place dancing and singing along.

Postscript.—P. E. Vanzolini was interviewed by Ron and Miriam Heyer on 26 January 2003 in Vanzo's house in the Cambuci neighborhood of São Paulo. Francisca Carolina do Val and Pat and Stan Rand corrected a draft and provided additional information that was incorporated.

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