

Björn Kurtén, an eminent paleotheriologist

Elaine Anderson

Anderson, E., Zoology Department, Denver Museum of Natural History, City Park, Denver, Colorado 80205, U.S.A.

Received 5 April 1990, accepted 6 December 1990

Björn Kurtén, the eminent Finnish paleontologist and author died 28 December 1988. He will be remembered for his innovative studies on fossil, especially Pleistocene, mammals and for popularizing science.

1. Introduction

“A paleontologist’s paleontologist”, an internationally known scientist, an innovative thinker, a brilliant writer, a popularizer of science, an inspiring teacher, a devoted husband and father, a sailor, a warm human being — that was Björn Kurtén. He died in Helsinki 28 December 1988 from complications following brain surgery.

Björn Kurtén was born in Vasa, Finland 19 November 1924, the youngest son of Lennart and Hjördis Kurtén, members of the Swedish-speaking community. Early interests were natural history, sailing, reading and writing. He graduated from the Vasa Svenska Samskola in 1943 and moved to Helsinki, where he entered the University taking courses in literature and physics. But the war interrupted his studies, and it wasn’t until 1945 after he completed his military service that he reentered the University, studying geology, chemistry, zoology and paleontology. From the beginning he was interested in functional morphology and paleontology. Since there was only

a small fossil mammal collection at Helsinki, Björn went to Uppsala, Sweden to study the splendid Lagrelius collection at the University under the direction of Birger Bohlin. One of his very first professional papers (1952) was a study of the Chinese *Hipparion* fauna housed at Uppsala. Björn received his Ph.D. from the University of Helsinki in 1954. His dissertation “On the variation and population dynamics of fossil and recent mammal populations” remains a classic. In it he made the first application of Life Tables to show mortality and survival in fossil mammals. After getting his degree, he was appointed Docent (Lecturer) at the University of Helsinki, a position he held until 1972. From 1972 until his death he was Personal Professor of Paleontology at the University. Swedish was his native language, the language spoken at home and lectured in at the University. He picked up English on his own and was as fluent in it as in Swedish. He spoke Finnish tolerably well, was fluent in German and knew several other languages.

In 1950 Björn married Ruth Nordman and they had four children, Solveig, Joachim, Andrea and Marina. Summers were spent in Stängesholmen in the Finnish archipelago. Here sailing, swimming, walking, birding, berry-picking and just relaxing were ideal ways to spend the long days of the Finnish summer. And of course, there was the sauna followed by a dip in the sea even when the water was chilly — he said it brought out his Viking blood. It was on Stängesholmen that Björn did much of his writing uninterrupted by the pressures of urban life. He wrote, “It feels odd to be in the city after so many days with the sea and forest and all the birds (and an almost tame vole) for company” (BK to EA 22.7.77). He knew the island intimately — its geology, fauna and flora gave him pleasure and inspiration. Stängesholmen was the setting for his best-selling novel “Dance of the Tiger” and the parts of a TV series on the Ice Age were filmed there. Björn always tried to arrange his schedule so he could spend most of the summer on Stängesholmen.

After he received his Ph.D., Björn began a lifetime of travelling to attend meetings, to do field work, and most important to study collections throughout Europe and North America. He often said that only those who travel see the whole picture. From Uppsala to Tunis, from London to Moscow, from Gainesville to Fairbanks, from Los Angeles to Boston, Björn crisscrossed continents studying collections, conferring with colleagues, measuring specimens. He delighted in finding old collections that had never been worked up.

Although not a field man per se, over the years he did do field work in Sweden (1948–49), Spain (1962) and Tunisia (1967–70). Very important to him were the Cursillos (II, III and IV Cursillo Internacional de Paleontología) in Spain starting in 1954 and the first contacts with distinguished European paleontologists such as M. Crusafont, H. Tobien, G. H. R. von Koenigswald and others. Björn attended and presented papers at meetings of many scientific societies. In 1959 he was invited to participate in a symposium “Genetics and 20th Century Darwinism” held at Cold Spring Harbor, New York. His paper “Rates of evolution in fossil mammals” was a landmark. On other trips to America he presented papers at meetings of the Geological Society of America

and the Society of Vertebrate Paleontology. In Europe he was invited frequently to give a paper or chair a symposium at scientific society meetings on paleozoology, evolution of mammals, continental drift, the Ice Age, Pleistocene carnivores or early man. Upon his arrival in Moscow to attend the First International Theriological Congress in June 1974, Prof. K. K. Flerov asked him to give the opening address (due to the unexpected absence of G. G. Simpson). With only a few hours to organize his thoughts, he spoke for almost an hour on rates of evolution in mammals.

As a teacher Björn was inspiring, helpful and demanding. He expected his students to work independently and did little supervising of their work, yet he was always available for consultation. He had relatively few students in Finland, but occasional graduate students from Sweden, the United States, Canada and Japan sought him out and studied under him. Since there were few fossils in Finland for them to study, visiting collections in other countries was a must, and he instilled in his students the importance of doing regional and global syntheses rather than provincial studies.

Björn received several fellowships at foreign institutions, and the family joined him for extended stays abroad. In 1959 they lived in Uppsala, Sweden while he held a Docentstipendium at Stockholms Högskola. Several Spring semesters were spent in Cambridge, England working at the University. In 1963–64 they all spent several months in Gainesville, Florida where Björn was visiting Senior Scientist at the University of Florida. Then in 1970–71 they set up house in Cambridge, Massachusetts where he was Agassiz lecturer at the Museum of Comparative Zoology, Harvard University. Besides lecturing at Harvard, he and Elaine Anderson began working on the book “Pleistocene Mammals of North America”.

Björn loved to write and published his first Swedish novel when he was 17. Scientific papers and books, popular paleontological and archeological narratives, novels and newspaper articles — all were succinct, written in a clear, lively, easily readable style. He was a keen observer and had a lively imagination which is reflected in his novels. He wrote in Swedish and English easily translating between them. His texts have

been translated into at least 14 languages, yet only two of his novels, “Dance of the Tiger” and “Singletusk”, and one collection of essays, “How to Deep-Freeze a Mammoth” have appeared in English. Björn was a great compiler and organizer of scattered data. He easily extracted the meat of an article eliminating extraneous material; “Pleistocene Mammals of Europe” (1968) and “Pleistocene Mammals of North America” (with Elaine Anderson) (1980) reflect these skills. He also wrote prolifically for newspapers and periodicals. With a light, almost humorous touch he elucidated the differences between science and pseudoscience and punctured popular biological myths relating to racism, sexism and warfare. Björn will be remembered for his innovative articles on evolution, population dynamics, intercontinental migrations, and half life of species. For popularizing science he received numerous awards — among them the Finnish state award for popular dissemination of knowledge (twice, 1970 and 1980) and UNESCO’s prestigious Kalinga Award for the popularization of science (1988). He was awarded an honorary membership by the American Society of Mammalogists in 1983 and was an honorary member of the Anthropological Society of Greece.

Björn was a good correspondent writing long, informative, amusing letters to colleagues (numbering in hundreds throughout the world) and family. To me he wrote not only about the Pleistocene but of his travels, Finnish weather, Stångesholmen, local and global concerns, his students, family and cats. He was very fond of cats so that there was always at least one in the household; “Thompson” was a great favourite for many years. His “Black Tiger” (in “Dance of the Tiger”) was *Homotherium* and to Björn’s great delight Eirik Granqvist reconstructed it almost life size and it became quite a “pet”.

Bears were a favourite subject. “Björn” in Swedish means bear, and it is fitting that he wrote at least 15 papers and a book “The Cave Bear Story” about ursids. His first study was on hundreds and hundreds of isolated teeth and limb bones of the cave bear that had been collected decades earlier but nearly forgotten in cupboards of the Geology Department of the University of Helsinki. He studied and measured almost every collection of cave bears in Europe, and to see his

eyes light up when he found a new collection was memorable. Two treaties on American bears, *Tremarctos* (1966) and *Arctodus* (1967) remain standard references. A nearly completed manuscript on American *Ursus* awaits revision and publication. Living bears fascinated him, he watched them for hours in zoos, was thrilled to see them in their natural habitat in Yellowstone National Park, Wyoming, and the highlight of his trip to Japan in 1987 was a visit to the Bear Park on Hokkaido where he observed about 250 *Ursus arctos* (he wrote a 2-page letter to me describing them and closed with “I’m still thinking and dreaming about all those fantastic bears!”).

Björn’s contributions to paleontology are many. He was the first person to study allometry in fossil dentitions, the first to study selection by differential survival in fossil mammals, the first to apply the half life concept to animals, the first to do research on dental correlation fields in fossil mammals. He was one of the leading proponents of the Modern Synthesis approach to paleontology. Unlike many of his colleagues, he worked at the species level. To him the living organism was always central, fossils the only way to know about extinct forms. In order to interpret the fossils, he looked at their living counterparts wanting to know how they looked, how they moved, what they did for a living. Then he could picture the extinct species from its bones and convey this information to his artists, Margaret Lambert Newman and the late Hubert Pepper for their reconstructions of vanished beasts and lost worlds.

A quiet person, Björn seemed at times shy. He was an avid reader and always carried books and papers with him to peruse. Sometimes he became so engrossed in a novel that he would not do anything else until he finished it. A person of simple habits, Björn nevertheless enjoyed classical music and good food and wine. Walking was a favourite activity, and an important part of his creative life. During their Florida sojourn, Björn preferred to walk to and from campus, invariably someone would offer him a ride which he would invariably refuse.

The Pleistocene was his favorite epoch — everything about it fascinated him but especially the carnivores, early man, the intercontinental

migrations, and at the end the extinction of so many species. In Scandinavia he was better known for his books popularizing paleontology, and later for his novels and essays. In "Before the Indians" (1988) Björn wrote; "The Ice Age will probably return. The great faunas will not. They are lost forever and it would take hundreds of thousands perhaps millions of years to produce a new megafauna. ... The mammoths, ground

sloths, the saber-tooths, and glyptotheres will remain shadows in the past." Now their interpreter too is gone.

I would like to thank Ruth Kurtén for her generous help and encouragement. "A paleontologist's paleontologist" was G. G. Simpson's phrase in his Foreword to Kurtén's "On Evolution and Fossil Mammals" (1988). References to books cited in the text can be found in the Bibliography included in this volume.