

Björn Kurtén, scientist and writer

Anto Leikola

Leikola, A., Department of History, University of Helsinki, Hallituskatu 15, SF-00100 Helsinki, Finland

I once asked Björn Kurtén whether there was any point in popularizing science, in writing essays on paleontology for the general public, as such an activity does not bring any scientific merit and probably not so much money either. “Why not”, he asked, “I like writing these things.”

Writing had always been Björn Kurtén’s favourite pastime, if this word can be used of a world-famous writer. Even when he was a schoolboy in Vaasa he had begun to write adventure stories, and so successful was he that three of his novels were published in the 1940s by reputable publishers. *Det nya jaktplanet* (The New Fighter) came out in 1941 when Björn was only 17 years old, *Spåret från Ultima Esperanza* (The Track from U. E.) in 1945, and *De tre korsen* (The Three Crosses) in 1948. But, as if he had not had enough of this genre, Kurtén surprised his readers in 1980 by publishing another early manuscript, *63 förstenade hjärtan* (63 Petrified Hearts), “an exciting and hilarious novel about crime, sailing and the archipelago”, as the publisher describes it. It was, of course, not by chance that the word “petrified” appeared in the title: the author was, after all, one of the world’s leading paleontologists. And the novel is exciting.

In spite of some favourable reviews and although one of his books was translated into Danish, Kurtén’s early success as a novelist was limited. He wrote in his mother tongue, Swedish,

but that market in Finland is very small, and it is difficult for a Finn to break into the market in Sweden.

The Swedish-speaking people in Finland are a rather special community. During the 12th and 13th centuries, when Finland — or rather the area inhabited by Finnish tribes — gradually became a part of the Swedish Kingdom, the Finnish coasts were being settled by immigrants from Sweden. Later on, when the country became more closely incorporated into the Kingdom, Swedish became the language of all education and administration. Only in the 19th century, when Finland was annexed to the Russian Empire as an autonomous Grand Duchy, did the Finnish language begin to gain a foothold as a language of literature and higher education, even at university level. There were, however, a great number of families who retained their Swedish tongue, whether this was their original mother tongue or had been adopted during the course of history. One of these was the Kurtén family, better known for its prosperous commercial activities than for any literary or scientific achievement.

Vaasa (in Swedish, Vasa), still a bilingual town, where the Swedish element is evident in many ways, lies on the west coast of Finland. It has always been an important commercial and educational centre, with a Governor’s seat and a

Court of Appeal for two centuries, and like all the main ports of the Finnish West coast, it has always looked towards and beyond the sea, not only to Sweden but to Germany, Great Britain, and North America as well. Maybe something of this spirit of his home town influenced Björn Kurtén when he ventured into international waters with his scientific and literary works. At least it is certain that his background helped him to begin studying paleontology in Sweden at a time when it was practically impossible to do so in Finland.

At the age of 18, after graduating from the Swedish Coeducational School in Vaasa in 1943, Björn Kurtén began studying zoology and geology at the University of Helsinki and, later on, at the University of Upsala under the guidance of the paleontologist, Birger Bohlin. In Finland, which is on the whole a country lacking fossils, there had not been a single vertebrate paleontologist since the death in 1866 of Professor Alexander von Nordmann, whose rich collections from South Russia lay practically unexamined in the Geological and Paleontological Museum of Helsinki University, although Nordmann's *Palaeontologie Süd-Russlands* (1858–1860) is considered a classic in its field.

Kurtén's first important works in paleontology, *The Chinese Hipparion Fauna* (1952) and especially his doctoral thesis *On the variation and population dynamics of fossil and recent mammal populations* (1953), which he presented at the University of Helsinki in October 1953, already bore the characteristics that typified his later research: the emphasis was on the ecological conditions in the past, and on population dynamics as a key to evolution, a line of research in which G. G. Simpson was the leading figure. Later on, Kurtén had the opportunity to get a closer personal contact with Simpson and other American paleontologists, when he spent a year at the University of Florida (1963–64) and another year as a visiting professor at Harvard University (1970–71). By the latter period he was already an international celebrity.

In 1955 he became a docent at the University of Helsinki, in fact the first docent in paleontology in the history of the university, and spent the academic year 1958–1959 in Stockholm with a Nordic Docent Grant. A docentship did not provide a livelihood, but for several years Kurtén

could rely on research posts offered by the State Board for Natural Sciences (since 1970, a part of the Finnish Academy) which also allowed him to stay abroad frequently, enjoying the opportunities to excavating, studying at great museums, and meeting colleagues from different countries. Kurtén's career in paleoecology, as he called his particular brand of research, e.g. in the subtitle of *Life and Death of the Pleistocene Cave Bear* (1958), was advancing well, and even the family was growing: he had married Ruth Nordman in 1950, and four children were born from 1954 until 1964. When Professor Pontus Palmgren, the holder of the Swedish-language chair of Zoology at the University of Helsinki, retired in 1971, Kurtén was among the applicants, but in 1972, before the matter was settled, he was nominated and appointed a Professor Extraordinary in Paleontology. This was a lucky turn of events, because it is unlikely that he would have obtained the ordinary chair, and his third three-year period as a Senior Researcher at the Academy would soon be over, so that he had already seriously considered emigrating to Sweden. This new professorship allowed Kurtén to devote himself mainly to his research work and to his writing. He did not lose touch with academic teaching but was virtually free of administrative duties at the University. When he died, on December 28, 1988, he had held his professorship for 16 years and was approaching the age of retirement.

This could have been the career of any devoted scientist sufficiently gifted and tenacious to make his name and works widely known among fellow scientists around the world. Kurtén was not only well known, he was recognized as a leading authority in his field.

Stephen Jay Gould, in his introduction to Kurtén's bestselling novel *Dance of the Tiger* (1980) describes him as "unquestionably Europe's finest evolutionary paleontologist" and continues: "He is, with George Gaylord Simpson in America, the founding father of an important scientific movement that united Darwinian theory with empirical studies of fossil vertebrates." While one may feel that the role of "founding father" should be left to Simpson, who was over twenty years older than Kurtén and who published his *Tempo and Mode in Evolution* as early as 1944, Simpson's own statement in the foreword to a

collection of Kurtén's early papers, *On Evolution and Fossil Mammals* (1988), is equally full of praise: "Björn Kurtén is a paleontologist's paleontologist or, to modify a frequent comment of sports reporters, he may be characterized as a 'world class' evolutionary biologist." This was not a light appraisal from a man whom Kurtén, in his preface to the same volume, recognized as his master: "My own work, like that of evolutionary paleontology as a whole, stems directly from his (Simpson's) *Tempo and Mode in Evolution*, which marks the great turning point in paleontological thinking." Kurtén was certainly there at the right moment with young and fresh brain to take full benefit of that turning point.

Thus Kurtén became one of the great authorities in his field, evolutionary paleontology and paleoecology in general, and cave bears in particular. Few writers have failed to connect his first name Björn — which means "bear" — to this specialty of his, and he himself has referred to this link. But then, after all, Björn is not such an uncommon name in Sweden and among Swedish-speaking Finns, and Kurtén's interest in cave bears in the early 1950s had a more practical reason: in the Geological Museum of Helsinki University the only fossil species the remains of which there were sufficient quantities for statistical analysis was the bear. And these remains were part of the collection that Alexander von Nordmann had brought to Helsinki from Odessa in the 1840s!

However, Björn Kurtén would not have become what he was without his interest to and ability for literary expression. After the early years, this passion did not result in fiction for a long time but took the form of popular essays. There was in Kurtén something of the journalist, a trait not very common in serious scientists, although there are undoubtedly splendid exceptions, excellent popularizers even among the "world class" experts in the field of science, among them G. G. Simpson. In the early fifties Kurtén was actually the editor-in-chief of *Studentbladet*, the journal of the Swedish-speaking students at Helsinki University, and throughout his life he had good contacts with journalists, publishing many of his essays in Finnish Swedish-language newspapers, such as *Hufvudstadsbladet*, in Helsinki, and *Vasabladet* in Vaasa. Through

these activities, and through his books, Björn Kurtén became well-known in the 1960s as a scientific author among the Swedish-speaking public in Finland.

During the 1960s Kurtén was active in many ways. He published his first collection of essays, *Urmänniskor och sabeltigrar* (Early Humans and Sabretooth Tigers, 1961), a book on the evolution of the human species (*Människans utveckling*, 1963), another one on the animals of the Ice Age (*Istidens djurvärld* 1964), and *Dinosauriernas värld — The Age of the Dinosaurs* (1968) — which spread his fame all over the world. It is interesting that although Kurtén was technically not a "dinosaur man" at all — his strictly scientific interests remained in Tertiary and Quaternary mammals — it was through dinosaurs that he reached a truly wide audience. Through international publishers cooperation the book appeared in the same year in Sweden, Great Britain, West Germany, Italy, France, Spain and Holland. Dinosaurs are, evidently, the most popular subject for a paleontologist, and although mastodons and sabretooth tigers have their fascination, they are perhaps still too close to the living species to possess the same exotic appeal as dinosaurs. But here, as usual, the decisive factor was that Kurtén knew how to write and how to make even difficult subjects readable for the general public. On the other hand, he never went into baseless speculations to which these Mesozoic monsters often seem to lead popular writers. The real dinosaur experts did not scorn Kurtén's venture into their field.

Simultaneously with the dinosaurs, Kurtén could bring forth a more technical monograph on his own territory, *Pleistocene Mammals of Europe* (1968), which became a standard work in its field and later a much sought-after rarity. "I have seen the most incredible bunches of photocopies of photocopies of the original book in the hands of paleontologists", said Mikael Fortelius when Kurtén's portrait was unveiled at the Department of Zoology at Helsinki University in 1985. (Incidentally, the portrait was painted by the highly esteemed illustrator, Hugh Pepper, who had earlier produced pictures of dinosaurs, rhinoceroses and Neanderthals in Kurtén's books.) Fortelius also said that he remembered a young paleontologist, probably in Marseille, who modestly

asked the author to sign one such bunch — which he did, of course. Twelve years later, the counterpart, *Pleistocene Mammals of North America* (1980), which Kurtén wrote in collaboration with Elaine Anderson, was published. “These books bring together and present widely scattered bits of information in a way that is absolutely unique in their field”, Fortelius stated in 1983. “But they also represent a unifying, synthetic view of the Pleistocene in general, much less constrained by political, historical or scientific boundaries than most comparable attempts.”

The next book, *Istiden — The Ice Age* (1969) — was a large, lavishly illustrated work, printed simultaneously for Swedish and British publishers. It is hard to tell which of these two editions can be called the original one, because Kurtén had adopted the habit of writing manuscripts in Swedish and English at the same time. “It depends on my mood”, he once said, “which of these languages I take first.” *The Ice Age* was also the first case in which a Finnish-language publisher took any interest in Kurtén; at first it seemed that a new printing in England would make the book far too expensive for the Finnish market, but fortunately, a cheaper printing firm was found in Hong Kong, where both the Finnish and the American versions were printed in 1972. By that time Kurtén had already earned official recognition as a popularizer of science: in 1970 he was awarded with the State Award for Popular Information. In 1980 Kurtén was among the very few to have received this award twice, and in 1985 two other domestic awards followed: the MTV Culture Award (established in 1977 by the Finnish commercial TV-network), and the Neovius Prize.

Book followed book: *Däggdjurens tidsålder — The Age of Mammals* (1971) — was again published simultaneously in Swedish and English and *Inte från aporna — Not from the Apes* (1971) — had a whole heap of translations: Italian, Dutch, Spanish, Danish, Japanese, German, but for some reason, not Finnish. The title was not, of course, intended as any denial of evolutionary theory but pointed out that the present apes, gorillas and chimpanzees are not our ancestors, as the popular belief for more than a century had twisted Darwin’s ideas. It was a good example of Kurtén’s sense of humour, reflected also in the

titles of his subsequent books of essays: *Hur man fryser in en mammut — How to Deep-Freeze a Mammoth* (1981) — and *De skuldlösa mördarna — The Innocent Killers* (1987) — both of which were soon translated into English and Finnish. Even Kurtén’s final monograph on his namesake — one could almost say his totem animal — *The Cave Bear Story* (1976), had a most exciting title in its Swedish version, published in 1975: *Björnen från Drakhålan* (The Bear from the Dragon’s Cave)!

However, it was not the bear that made Kurtén into a world-famous novelist but another Pleistocene carnivore, the sabretooth tiger. In retrospect, it is not surprising that Kurtén should have begun writing novels dealing with paleontological themes. What was surprising was that he succeeded so well, and not only in depicting animals and humans whose kind had disappeared more than thirty thousand years ago, but also in creating true literary art the value of which does ultimately not reside in the fact that the author is such an expert on his uncommon milieu.

Den svarta tigrern (The Black Tiger) was published in Sweden and Finland (in Swedish) in 1978, and the American edition, *Dance of the Tiger*, was ready two years later. Translations followed: German, Finnish, Italian... The reviews varied. In his introduction to the American edition Stephen Jay Gould defined the book as “a wonderful combination of scrupulously accurate science, ingenious conjecture, compelling writing, and a damned good story”. “A first-rate novel!” John Gardner exclaimed, whereas Mary Renault described it as “informed, lively and persuasive”. “Like all good novels this one transcends commercial categories,” wrote Barbara Mertz in the Washington Post. “It has elements of allegory, of fantasy, and of myth. It is also a kind of detective story, complete with a challenge to the reader.” Barbara Mertz, much in line with other critics, also pointed out Kurtén’s professionalism, which, for her, showed not only in the selection of material, but in the use he made of it. “His book has an additional ease and sureness, a willingness to depart from accepted clichés, that is, in part at least, a result of long years of immersion in the subject.” Even those critics who were not so enthusiastic about the literary value of “The Tiger”, agreed that it was well worth reading. As

the influential *Publishers' Weekly* put it: "Kurtén makes prehistory come alive, and while he may not be a great novelist, he is an effective writer, and it is thrilling to learn what he knows."

The genre of "paleofiction", as Kurtén himself called it, is not new. From time to time novels have been written on human prehistory, and, naturally enough, the Neanderthals have been a favourite subject of this genre — frequently only to show how overwhelmingly clever modern man is compared to that vanished race. Often these stories have nothing specific of the Ice Age; the same adventures could happen at any time in history — or in the future, for that matter. Kurtén does not treat his Neanderthals like this. He makes them complete human beings, only different from modern man who in the novel is represented by the hero, Tiger, whereas the heroine, Miss Weyde, is a member of the polite and lovable Neanderthal people. Through this setting, Kurtén can test his particular theory about the disappearance of the Neanderthals — a theory too bold and too speculative to be presented in a scientific context — but he also penetrates deeply into human values. In many respects the values upheld by the Neanderthals, the losers, are higher than those practised by present-day European and American society. We have much to learn from the Neanderthals, after all. *Dance of the Tiger* was followed by *Mammutens råddare* (1984), literally "The Guardian Spirit of the Mammoth", which in the English edition was given the title *Singletusk*. That was a direct continuation of the story of Tiger and Weyde, and also the end of their story. Whether Kurtén planned to continue writing paleofiction about the Ice Age or other phases of human evolution, we do not know for sure.

Among the scientific recognitions that Björn Kurtén received as he advanced in his career were an Honorary Membership of the Greek Anthropological Society — Kurtén was active in studying fossils from the Petralona Cave, including one of the most ancient human skulls found in Europe — and that of the American Society of Mammalogists. The greatest honour, however, came for Kurtén's popular works: the Unesco Kalinga Prize, an award for the popularization of science which had earlier been given to such celebrities as Prince Louis de Broglie, Sir

Julian Huxley, George Gamow, Bertrand Russell, Karl von Frisch, Jean Rostand, Sir Fred Hoyle, Gavin De Beer, Konrad Lorenz, Margaret Mead, Sir Peter Medawar, and many others. It is a routine practice that every year Unesco Commissions in different countries are asked to propose a candidate for the Kalinga Prize. In March 1988, the Finnish National Commission decided, on the suggestion of Professor Henrik Wallgren, head of the Department of Zoology at the University of Helsinki, to nominate Björn Kurtén. It became soon evident that it would be practically impossible to obtain in due time the required number of Kurtén's books (five copies of each) and the Commission became rather pessimistic about his chances. The surprise and joy were all greater when it was announced in November that, following the recommendation of the International Jury for the Kalinga Prize, the Director-General of Unesco had decided to award the 1988 prize to Björn Kurtén. Evidently his books were so widely known and his name so famous that no actual book by him was needed!

In his letter to the Finnish Unesco Commission, the Director-General remarked: "Allow me to say how gratifying it is for me to be able to express in this way the Organization's (i.e. Unesco's) recognition of a science communicator of such outstanding quality."

But on the same day that Kurtén himself received the news he was preparing for a stay in hospital for an operation on a minor brain tumour. The operation was successful, but while he was in hospital, Kurtén caught an infection, and before the year 1988 had ended the eminent scientist and writer was dead. The Kalinga Prize was handed to Mrs. Ruth Kurtén with due ceremony by the Director-General, Federico Mayor, during his visit to Helsinki in February 1989.

There is one particular feature of Björn Kurtén's writings that I should still like to mention. This is his appeal to scientific empiricism, to sound reasoning and to common sense. Whether he wrote about dinosaurs, or cave bears and mammoths, or early humans, he wanted to take the reader with him, as if on an excursion, to show him the findings and observations, and to demonstrate that everything he wrote was based on earlier knowledge, on reasoning from the facts — with, of course, a certain amount of invention

but never with loose speculation or fantasy. He seldom took part in public discussions, but against all pseudo-science, such as so-called creationism, he was adamant. Thus he not only taught his readers about the nature of the lost worlds of the past but also about the nature of scientific knowledge itself; he had the true biologist's belief that the scientific way is the only way to obtain reliable knowledge about the world surrounding us, and he was convinced as well that through biology we can learn things about ourselves that touch the deepest layers of our human existence.

He was a defender of nature. He saw that humankind can only have a future if it is recon-

ciled with nature. The last paragraph of *The Ice Age* sounds like a lesson and at the same time like a warning:

"Where man moves in with his fires, his cattle and goats, mice and rats, disruption moves in with him. He enjoys an episode of predatory exploitation, at the end of which he is punished by diminution of his food supply and decline in his numbers. The process is now culminating on a global scale and there can be nothing more urgent than finding the way back to a sane interaction between man and his surroundings. And this, I think, is the chief moral to be gained from the study of the Ice Age".