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PREHISTORIC TIMES

PREHISTORIC TIMES
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ONE HUNDRED & FIFTIETH ISSUE

**KING
KONG**
AT 91 YEARS

**JACK
HORNER**

**JAY
MATTERNES**

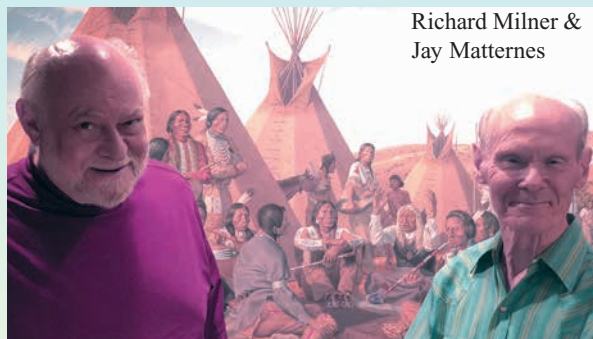
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PREHISTORIC TIMES INTERVIEW:
JAY MATTERNES AND
RICHARD MILNER
ON THEIR SPECTACULAR NEW
BOOK OF WILDLIFE
AND PALEOART



Richard Milner & Jay Matternes

PT: Please tell us about your beautiful new book.

Richard Milner: Working on this book with Jay Matternes over the past eight years has been quite an involving journey through his remarkable life and art. He is still going strong at age 91. Although his name has been unknown to the general public, Jay's work has been seen by millions who "grew up" with his murals at the National Museum of Natural History (Smithsonian) in Washington, D.C., and the American Museum of Natural History in New York. Over the years he created countless beautiful, science-based illustrations for *Natural History*, *National Geographic*, *Science*, *Scientific American*, and other prestigious magazines. In 1967, his special knack for drawing great apes won him the job of illustrating Jane Goodall's groundbreaking book on wild chimpanzees.

PT: Are there any other books out about Jay's art besides yours?

RM: Yes, Jay's home museum, the Smithsonian, published a thick volume of the paintings and sketches that led up to his murals there, *Visions of Lost Worlds: the paleoart of Jay Matternes* by Kirk Johnson and Matthew Carrano, which came out two years ago. That book was a commemoration of his six iconic Smithsonian murals on extinct mammals, which were being retired from exhibition and digitally archived. Our book covers just about everything else: childhood drawings, sketches of free-living gorillas at Dian Fossey's field station in Rwanda, dinosaurs, African antelopes, birds, orangs, gorillas, hunting dogs, hominins and early humans, and scenes of traditional American Indians in the nineteenth century.

PT: Jay, why did you include scenes of American Indians?

Jay Matternes: Because ever since I was a kid watching cowboy movies, I've had a romance with the Old West. One of the reasons we had difficulties placing this book was because some publishers could not see why my Indian paintings or duck stamp designs were included when they were expecting a book confined to paleoanthropology and extinct mammals. Richard insisted from



was delighted when Richard accepted, as I had loved his one-man show "Charles Darwin, Live & in Concert," when my wife and I caught it at the Smithsonian's Baird Auditorium, and I also admired his previous paleoart book, *Charles R. Knight; the Artist Who Saw Through Time*. Knight was my boyhood idol, so I thought that this book would put my art in good company indeed.



I was born in the Philippines, and spent my childhood following my father, an army surgeon, who was assigned to various bases around the world. In 1946, my mother, brother, and I were living in Pennsylvania while dad was assigned to work at a hospital in New York. Since I wanted to see the American Museum of Natural History so badly, dad invited me to visit him in New York one weekend to go see it together. On the Saturday we toured the Bronx Zoo, and on

the first that it was not going to be just a history of paleoanthropology (although it's that, too!) but a true retrospective of my life's work. This book accurately reflects the range of my various interests and passions over the years.

PT: How did the book get started?

JM: It was actually begun in 1997 by paleoanthropologist

Ian Tattersall, who was then Chairman of Anthropology at the American Museum of Natural History. We became friends when he and designer Willard Whitson commissioned me to paint a mural of primate evolution for the AMNH, which is featured in our book. Ian's original idea for the book was to show the history of paleontological understanding over the past century through my paintings. Anyone who delves into the subject soon realizes that works of paleo-reconstruction are really snapshots in time of what we think our remote relatives and ancestors looked like. Of course, that's constantly changing as new discoveries are made. After a year of shopping the proposal around with a book packager, without any buyers, Ian asked his colleague Richard Milner, a senior editor at *Natural History* magazine whether he'd be interested in continuing the project. I

Sunday the museum. I never got over it. That visit more than anything else formed my career and aspirations: I wanted to be a staff artist in a major natural history museum!

My dad was not keen on my interest in art as a vocation. But gradually, after assurances from art professors that I could make a living at it, dad gradually reconciled to the fact that his son would not be following him into medicine.

When the Korean War broke out, during my senior year in high school, Dad was sent to Japan, and the rest of our family again went to stay in Lancaster. A well-connected family friend showed some of my drawings to the chief staff artist at the Carnegie Museum, which led to my being offered a full scholarship to the Carnegie-Mellon University. Also, I began working as a freelancer at the Smithsonian where I challenged a senior curator's reconstruction of a large mammal that I thought was anatomically incorrect. He wanted it drawn with its legs bent at the knees, like a reptile, which was the way the museum's fossil skeleton was mounted. I insisted that was impossible and painted the animal with upright legs, like an elephant. The curator said, "Matternes, it would be better—and less expensive--if



you would conform your paintings to the mounted skeletons, rather than have us remount the skeletons to conform to your paintings." But I kept the job.

RM: As a young freelancer at the Smithsonian, Jay still considered himself primarily a wildlife artist who loved painting raptors, hunting dogs, big cats, African antelopes, and primates, especially the great apes. During his early days at the museum, he told me, it never entered his mind that his primary focus would become painting near-humans that had not walked the Earth for millions of years. His career took a sharp turn in that direction, however, when he was invited by the editors of Time-Life Books to create illustrations for their mass-marketed *Early Man* (1965). In that book, he brought a startling new level of photorealism to his depictions of early human relatives. I remember admiring it when I was a grad student at Berkeley.

PT: How do you go about restoring the appearance of an extinct animal?

JM: There are basically three stages.

Gorilla family portrait



Copyright © Jay H. Matternes

First, I begin by working with casts of the fossils, drawing all bones and fragments of the specimen, sometimes actual size as measured with calipers. Often, you must restore partial and distorted elements or extrapolate missing parts. Next, using both drawings and clay sculptures, I assemble an individual's skull and skeleton, then overlay the muscles and soft tissues, and finally, apply surface features and textures like skin and hair.

PT: Who are some of the prominent figures in primate studies and paleoanthropology that you have worked with over the years?

JM: I've collaborated with the famous Louis Leakey, and his son Richard. I painted the illustrations for Jane Goodall's first groundbreaking book on the wild chimpanzees at her Gombe Stream Research Station in Tanzania, although I only met with her several times.

But my deepest friendship for many years was with the iconic field ethnologist Dian Fossey, one of Louis Leakey's famous trio of "ape women." She devoted her life to studying mountain gorillas and became their public protector. I believe she helped to save them from extinction at the hands of politicians and poachers, who were callously destroying them for short-sighted gain.

Dian befriended me when I visited her Karisoke Research Station in the Rwandan forest in September 1974. A decade later, I returned there to continue sketching the free-living gorillas.

Each day I accompanied one of Dian's students and an African tracker-guide to visit the first groups tolerant of human observers. We would approach on all fours, where they could see us well, making 'belch grunts,' which is proper gorilla protocol. On the first day, a curious adolescent called 'Pantsy' approached us and stood over me on all fours, smelling my hair, and lightly touched my ear with her pursed lips. I would not have thought it possible to be touched so gently by a wild gorilla.

Dian and I continued our friendship over a twenty year-long correspondence, which I have cherished and saved. Her Estate granted us permission to publish excerpts from those letters in our book, which include some fascinating material that

Blonde grizzlies

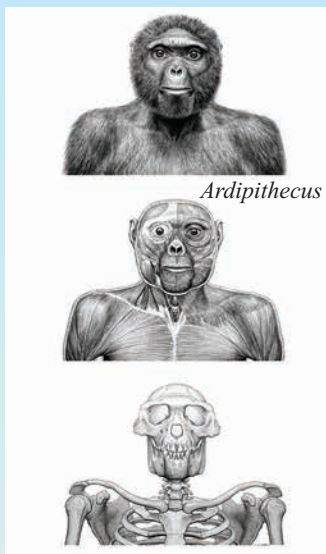


could not be revealed during her lifetime.

Dian visited the States again in 1983, and returned to Rwanda on November 20 of that year. She called to tell us of her departure from Ithaca, New York. That was the last time Del and I would hear from her. It was headline news worldwide when she was murdered in her cabin on December 26, 1985, aged 53, by an unknown assailant, possibly one of the poachers. She is buried among the slaughtered members of her gorilla family in the little graveyard at Camp Karisoke.

PT: What advice would you give to young artists who want to pursue paleoart?

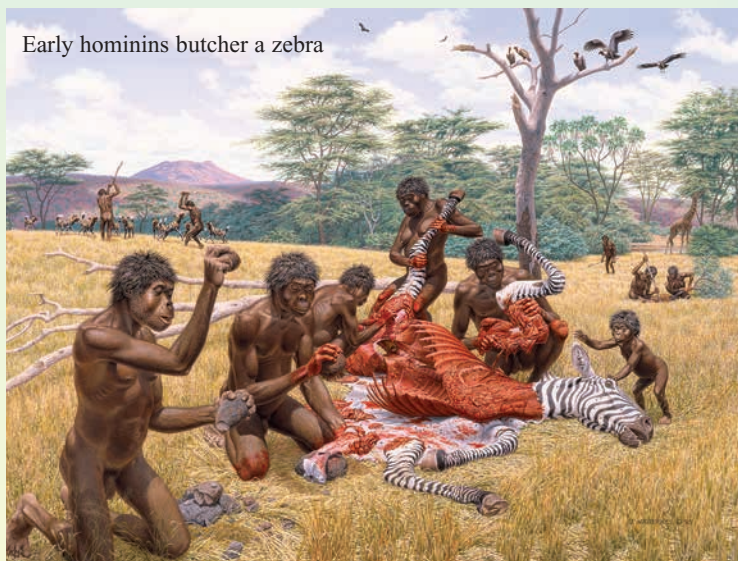
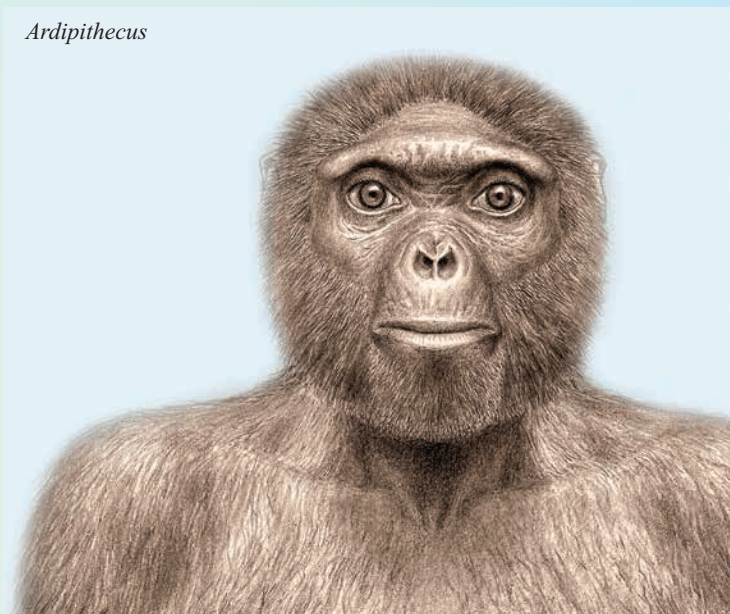
JM: I found—as Knight did before me—that the only way that you can really interpret extinct fauna is through an intensive study of living animals. You need to do some dissections, so you know the anatomy of muscles and joints. You should learn everything about their psychology and behavior as well as their physical form. The kinds of habitat they live in—it’s all interlinked. So you should first go to the zoo and make reams and reams of drawings from life, and study good museum mounts as well. And you can use photos for reference of animals in motion, but you should never copy from them directly. Try to grasp the animal in three dimensions and move it around doing different activities. I sometimes made sculptures in working up my reconstructions. They were quick and dirty models, done just as guides for drawing.



ment has ever achieved. (The Manhattan Project to develop the atomic bomb from 1939 to 1946 had to remain top secret for only seven years!)

Ardi’s anatomical features are unlike either modern apes or humans, but contain aspects of both. No bent-over knuckle-walker, she was fully upright and bipedal, with plantigrade feet—yet she also retained long, enlarged big toes capable of grasping. So, while these hominins could move around bipedally on the ground in their riverine forest habitats, they would also have been quite comfortable in the trees. Unlike chimpanzees, the males did not have especially larger canine teeth than the females—more like the human condition. My cover portrait of an “Ardi” female on the October 2, 2009 issue of *Science* magazine, along with the full body reconstruction inside, was flashed around the world. *Time* magazine placed the discovery and analysis of *Ardipithecus* as Number One on its list of the year’s Top Ten Scientific Achievements. Public

Ardipithecus



PT: How did you become the first paleoartist to reconstruct *Ardipithecus* and why was it such a long-held secret?

JM: In 1997, the anthropologist Tim White introduced me to “Ardi” in a phone call. He asked if I would be interested in working with his team to reconstruct a full figure of an extraordinary hominin fossil that had come to light during their fieldwork in Ethiopia’s Afar region. It was four and half feet tall and about 4.4 million-years-old. When I jumped at the chance, Tim immediately swore me to secrecy about the find, a security measure against academic piracy imposed on all of the 47 anthropologists, anatomists, and geologists who joined the *Ardipithecus* project. Remarkably, not one collaborator leaked any information to the press during the 15 years they worked on it until Tim announced the discovery in 2009—an admirable feat of security surpassing anything the federal govern-



attention and credit were focused on the scientists, but I was barely mentioned as “a staff artist” who did some drawings. I had worked on Ardi off and on for eleven years without compensation, as the scientists’ grant contained no budget for an artist.

But I knew it was a very important fossil related to human evolution, and I wanted to be the

one to bring it back to life.