A handful of early Boone and Crockett Club members were pioneers in the science and art of modern taxidermy. Their preserved specimens filled museums with animals on the verge of extinction. They hoped an informed public would help them save what remained.
For outdoorsy kids of the 19th century, killing animals and stuffing them was good, clean fun. Take Boone and Crockett Club co-founder and U.S. President Theodore Roosevelt. When the family embarked on a trip to Egypt, the 14-year-old packed a gun, an assortment of prepared labels, and containers to preserve bird specimens he planned to collect. As the steamer sailed home, he preserved the specimens in his cabin, which his little brother refused to share as he “revolted at sharing a room with someone who frequently filled the washbasin with the guts of the animals he was dissecting.”

When he was 18, Theodore Roosevelt collected and mounted this snowy owl from Oyster Bay, New York.
Perhaps the young TR’s enthusiasm for preservation was bolstered after visiting the birthplace of human preservation. The ancient Egyptians preserved humans and their pets as early as 2200 B.C. Thousands of years later, around 1530, the Italians preserved the earliest known animal mount in a cathedral in Ponte Nossa, Italy. It’s a crocodile hanging from the ceiling. Taxidermy techniques in Europe evolved over the centuries as a way to display hunting trophies from estate lands and for decor. In the 1800s, the Ward family in England became synonymous with taxidermy for well-to-do hunters and royalty. The Wards ingeniously turned hunting trophies into Victorian-era furniture, like a stuffed bear serving drinks. In addition, Rowland Ward published the first big game records in 1892. Records of Big Game established the first benchmarks for what constituted a trophy and focused on big game from around the world.

Around the same time in the U.S., another Ward was making waves in the world of taxidermy. Professor Henry A. Ward started Ward’s Natural Science Establishment in Rochester, New York, and he employed a team of taxidermists who mounted exhibits for the Chicago World’s Fair in 1893, bison for Buffalo Bill, and Jumbo the elephant for P.T. Barnum. Helping to mount that famous African elephant was a young, aspiring taxidermist named Carl Akeley.

**Carl Akeley**

Long considered the father of modern taxidermy, Boone and Crockett Club member Carl Akeley lived a truly spectacular life. He choked out attacking leopards with his bare hands, hunted all over Africa, and survived being pinned to the ground between an elephant’s tusks, among other accomplishments. His contributions to taxidermy include developing the first habitat diorama and employing a first-of-its-kind method of modeling specimens that made them lightweight, durable, and incredibly lifelike. And if that wasn’t enough, he was one hell of an inventor.

When he was 19, Akeley got a job with Ward’s Natural Science Establishment. He experimented with different taxidermy techniques, including building a skeleton out of iron and wood, covering it with clay, and then the animal’s hide. The clay’s malleability allowed Akeley to create lifelike muscles and skinfolds, but clay attracts moisture. After a while, the moisture causes the skin to shrink or rot. After years of experimentation, Akeley would eventually find a solution.

In 1886, he moved to Milwaukee to refine his taxidermy technique and work at the Milwaukee Public Museum. At the museum, Akeley created the “Muskrat Group” diorama, which might be the biggest thing to ever happen to a muskrat. As a kid, Akeley hunted northern Wisconsin for fur-bearers and knew what kind of habitat a muskrat loves. The diorama featured five stuffed muskrats in a bog surrounded by native vegetation. It also featured muskrat life above and below the water. Featuring animals doing animal things in their natural habitat was a new concept, now known as the “Milwaukee style.”
Akeley designed and built the "Muskrat Group" for the Milwaukee Public Museum. Credit is given to Akeley for displaying animals doing everyday things in their natural habitat.

Akeley’s genius didn’t end with muskrats. He was the chief taxidermist of Chicago’s Field Museum of Natural History from 1896-1909, and while he was there, he was still tinkering with manikin techniques. One day in 1898, Akeley was riding the trolley to work when a solution to the clay problem came to him. He turned a quick 180 back to his studio, where he refined a process that produced hollow animal molds of incredible strength—and only a quarter-inch thick. These molds were more accurate than bronze casting, providing a lifelike surface to apply the hide. He tried this method on his landmark diorama, “Four Seasons of the Virginia Deer,” at the Chicago Field Museum. This exhibit depicts 16 whitetails, with four deer in each diorama representing each
season. The taxidermy world was turned upside down, and all amateur taxidermists, including future U.S. president and Club co-founder Theodore Roosevelt, rushed to see the display. Akeley even refined the process to streamline the creation of diorama accessories like leaves and branches.

This 1927 silent film from the American Museum of Natural History provides a brief glimpse into Akeley's techniques. It shows workers mounting an Indian elephant from raw hide to finished product.

In 1909, Akeley left the Chicago Field Museum for the American Museum of Natural History in New York City. There, the veteran explorer, hunter, and taxidermist was given free rein to work on projects like the Hall of African Mammals. This massive display includes 28 dioramas of African specimens, including a centerpiece featuring a family of eight, full-size elephants. Unfortunately, Akeley died a decade before the completion of the hall.

Akeley’s creative mind worked nonstop. He invented a spray mechanism to create artificial rocks, which evolved into a cement gun used to line the sides of the Panama Canal and trenches during WW I. He also invented a motion picture camera that could pan and tilt easily, also used during WW I for aerial reconnaissance. That camera was also used to film the first King Kong movie.

William Hornaday

Another protégé of Henry Ward was William Hornaday, an early Club member and ardent conservationist. Around 1874, Hornaday was 19 when Ward gave the recent Iowa State graduate an entry-level job at his studios. After just six months on the job, Hornaday told Ward he was going to Africa to “collect” gorilla specimens and wanted to know if Ward would like him to get anything while he was there. Hornaday never lacked confidence.

From 1882 to 1890, he was chief taxidermist at the Smithsonian in Washington, D.C., and wasn’t yet 30. Like his colleague, Carl Akeley, Hornaday was a pioneer in the presentation of animals with backgrounds that showed their natural habitat. Because he was so good at caring for dead animals, he was put in charge of living ones as Curator of the Department of Living Animals, which led to the creation of the Washington Zoo.
Group of bison collected and mounted by Hornaday, 1886-87. Exhibit case featured in the mammal exhibit in the South Hall of the United States National Museum, now known as the Arts and Industries Building, Smithsonian.
In 1891, Hornaday wrote a comprehensive book on taxidermy titled *Taxidermy and Zoological Collecting*, which became a valuable resource for aspiring taxidermists. The book covered techniques for preparing and preserving specimens and the ethics of collecting.

By 1896, Hornaday became the first director of the New York Zoological Park (now known as the *Bronx Zoo*). As director of the park, Hornaday and fellow Boone and Crocket Club member Madison Grant created the *National Collection of Heads and Horns* (NCHH) as a taxidermy display of outstanding big game specimens from around the world before they were all hunted into extinction. By 1910, the NCHH had grown to nearly 700 specimens. Not more than a dozen years later, a special building in New York City’s Bronx Zoo was constructed to house the display. At the May 1922 opening of the new museum, the collection was officially dedicated “In Memory of the Vanishing Big Game of the World.” It is a long-held belief that the exhibit helped to spark the American conservation movement.

Hornaday believed that he could save some of the last remaining specimens of a species by killing and stuffing them. This included the last of the remaining bison living in the United States. He traveled to Montana in 1886 to collect bison specimens for the Smithsonian. He found only a handful and killed them for display. The irony of tracking down the last remaining bison just to kill them and put them in a museum wasn’t lost on Hornaday. In *Mr. Hornaday’s War*, Stefan Bechtel writes, “In his autobiography, written forty-eight years after these events had faded into memory, Hornaday acknowledged his own misgivings over what the museum party was about to do—and begged the forgiveness of future generations for what could arguably be called a crime.”

**James Clark**

Just two years after working as a sculptor at the *American Museum of Natural History* (AMNH), James Clark met his idol, Carl Akeley. “I could hardly speak,” Clark wrote. “To me, he was my hero.” The two men talked for a bit, and Akeley watched Clark go about his work. Two days later, Clark’s supervisor received a letter from Akeley. He liked what he saw in Clark and invited the young sculptor to study under him at the Chicago Field Museum.

When Clark started at the AMNH in 1902, he spent every weekend and holiday at the Bronx Zoo, studying animal anatomy and structure to refine his taxidermy technique. He was employed by the AMNH from 1902 to 1908 and again from 1923 to 1949. He served as the museum’s Director of Arts, Preparation, and Installation from 1935 until his retirement.
An example of Clark's taxidermy process for creating a mounted specimen of an Asiatic lion in the 1930s.

As a young apprentice, Clark used Akeley’s knowledge to help him refine his own innovative methods and techniques. Clark’s displays were so lifelike that he was soon put in charge of numerous animal groups at the AMNH, including the African lions and white rhinoceros in the Hall of African Mammals. During his tenure, Clark reorganized the department to expand the exhibits, assembling a team of skilled taxidermists and artists to execute the museum's diorama exhibits. He was charged with overseeing the Hall of South Asiatic Mammals, the Hall of African Mammals, and the Hall of North American Mammals.
While on a specimen-collecting expedition in Africa, Clark received an urgent letter from Akeley, who needed his help. Theodore Roosevelt was on safari there and killed four elephants. Clark and Akeley skinned, salted, and dried the skins to preserve them for transport and display at the AMNH. Those elephants are part of the massive centerpiece display in the Hall of African Mammals. After reading Clark’s description on how to properly preserve something as massive as an elephant in his book, *Good Hunting*, it’s no secret why Akeley called on his young protege for help. And it’s rather fitting that when Carl Akeley died before the completion of the Akeley Hall of African Mammals at the AMNH, James Clark took over and finished the project. He retired from the museum in 1949.
Members of the Boone and Crockett Club certainly were not the only artisans skilled in taxidermy art. Martha Maxwell opened the Rocky Mountain Museum in Boulder, Colorado, in 1874. Instead of stuffing her specimens with straw and rags, she used plaster and iron frames to create volume in her specimens. Charles Willson Peale was one of America’s earliest professional taxidermists who mounted specimens brought back by Lewis and Clark.

Explorers and artists like Akeley, Hornaday, and Clark worked to refine those early taxidermy techniques and helped bring awareness to the plight of disappearing species across the globe. Today, we can still view their works of art in museums across the country. And thankfully, we can see nearly all of those animals very much alive in the wild today.

Watch how Akeley and others created the most life-like displays of animals found anywhere in this video produced by the American Museum of Natural History.

About the Impact Series

The Impact Series is dedicated to showing how sportsmen, members of the Boone and Crockett Club in particular, saved the wildlife and wild places of the United States. Early members of the Boone and Crockett Club comprised the movers, shakers, and initiators of the American conservation movement. They were hunters, anglers, explorers, lawmakers, soldiers, and above all conservationists. These members established laws that allowed our wildlife resources to flourish. They also protected landscape-scale geologic marvels and American icons like Yellowstone, Grand Canyon, Denali, and many, many more. These members may no longer be with us, but their legacy remains.

This series aims to honor their accomplishments and remind us of the good work still yet to do.

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