# NAME THAT ELK COUNTRY

BY VIVIEN FELKER

*In the late 1800s, a subspecies of elk disappeared from these these plentiful peaks and valleys. Or did they? A new investigation may reveal the long-lost secrets of these missing elk. Can you guess where it is? Turn the page to find out.*

PHOTO: MONTY JACKSON

## Name That Elk Country: White Mountains, Arizona

Sometime in the early 1900s, teenager Jesse Burke was exploring a canyon in the White Mountains in present-day Arizona. Above the walls of the canyon rose dusty red peaks, including Escudilla, a bowl-shaped mountain Aldo Leopold famously memorialized in "A Sand County Almanac" as the haunt of this territory's last grizzly.

As he hiked, Burke stumbled onto a deadhead bull elk with 51-inch main beams and a 53-inch inside spread. He'd later learn he'd found one of the few remaining specimens of the so-called "Merriam's" elk subspecies. Merriam's elk roamed the southwest U.S. before they were hunted to extinction at the close of the 1800s. They were said to have a darker and more massive head than other wapiti, but with only three specimens of Merriam's elk known to science, firm conclusions about the subspecies are tough to draw.

Natural history museums across the country approached Burke about purchasing the bleached antlers. But according to a newspaper article by John Horne, he didn't bite. "[Burke] felt that some remembrance of the extinct Arizona native elk should remain within the state," Horne recounted in his 1966 article about visiting with Burke, who'd become a legendary outfitter. The rack hung over the front doorway of the "Beaverhead Lodge" at the headwaters of Beaver Creek in Alpine. Built by Burke and his wife, it was the headquarters for his guiding business. He offered all sorts of big game hunts, but was best known for his houndmanship.

In 1966, Burke took the skull and antlers down and donated it to the University of Arizona, which did not have a public museum. Burke's antlers have remained in storage for almost 60 years.

In the meantime, scientists have begun to question whether elk actually have subspecies, postulating that differences may just be a matter of geography and the impacts of different kinds of forage on body size, hair color and antler shape (such as crowning in Roosevelt's elk). In short, many argue that Merriam's, tule or Roosevelt's are all simply just elk. In 2017, the International Union for Conservation of Nature (IUCN) seemed to concur at least in part with this assessment as they reclassified all North American elk excluding tule and Roosevelt's elk as one singular subspecies, *Cervis canadensis*.

Jim Heffelfinger, wildlife science coordinator for Arizona Game and Fish Department, feels more in line with the lumpers than the splitters when it comes to Merriam's. "[Merriam's elk] habitat was connected with the southern Rockies and so these were probably just the southern extension of whatever elk were in Colorado," he says.

Others believe Merriam's elk were not only distinct but survived long enough to interbreed with the Yellowstone elk introduced to Arizona beginning in 1913, passing on the genes for their super-sized racks in the process, which could help explain the many record book bulls taken in this area. In 1968, rancher Alonzo Winters downed a colossal bull in the Whites so massive he had to notch one of the main beams because nowhere on the bull's 442 ⅝ inches of antler was narrow enough to wrap the required metal tag around. The marvelous animal has reigned as the Boone and Crockett Club's world record typical elk since it was entered into the books in the late 1990s.

In 2001, RMEF helped fund a study by scientists Heffelfinger, James R. Purdue and Ken E. Niccols to collect DNA samples from Arizona elk and compare them to modern Yellowstone elk. Arizona DNA showed what you'd expect to see from relatives of the Yellowstone herds. However, it didn't answer whether Merriam's elk genetics differed, so the researchers pulled the Jesse Burke bull out of storage and knocked the dust off it, literally and figuratively. They ground bone dust away from the skull and compared its DNA to assorted Rocky Mountain elk. The team found slight genetic differences from Rocky Mountain elk but felt a larger genetic analysis was needed. Heffelfinger and Emily Latch at the University of Wisconsin-Milwaukee will soon attempt to extract DNA from the other Merriam's elk museum specimens, located in the respective Smithsonian National Museum of Natural History in Washington D.C and the American Museum of Natural History in New York, to compare with elk from other regions for a more robust and comprehensive DNA analysis.

Time will tell if this work will distinguish enough genetic differences to indicate a true subspecies of elk, says Heffelfinger. And if so, it'll be thanks at least in part to a 100-year-old rack and a man named Jesse Burke.