



WHETHER WE REALIZE IT OR NOT, HUNTERS ARE CITIZEN SCIENTISTS.

Presumably, you buy a hunting license and participate in hunter harvest surveys when asked or required. You report your duck bands. Congratulations, you are now part of an important dataset. You are a member of the public who helps conduct scientific research. That is a citizen scientist.

Citizen science isn't new. Some credit Thomas Jefferson with the idea by employing a network of weather watchers throughout the colonies to try and understand what we now call meteorology. It seems predicting the weather has been a hot topic for centuries. Today, the Audubon Society—a product of Boone and Crockett Club Member George Bird Grinnell—asks members of the public to participate in the Christmas Bird Count.

They count and identify birds, then share the information with the Audubon Society, which has been compiling the results since 1900. This longstanding tradition was the brainchild of Frank M. Chapman, an early member of the Boone and Crockett Club.

"Hunters collect data on biodiversity in its key dimensions," wrote the authors of a recent paper published in *Global Ecology and Conservation*. The paper recognizes that engaging hunters as citizen scientists has its merits, namely in the collection of data from a large group of participants. The record-keeping system of the Boone and Crockett Club is no exception.

The Club has been measuring North American big game since 1895. In the 1920s, it began keeping records and released the first

record book in 1932. Today, there are more than 70,000 records in the Boone and Crockett system. Like those Christmas bird counts, is this citizen science? You bet it is.

WHAT GOOD ARE RECORDS?

In the late 1800s, the founders of the Boone and Crockett Club were concerned about the fate of big game animals, especially in the western United States. In all reality, they thought many of these animals would become extinct. They wanted to document them before they were gone.

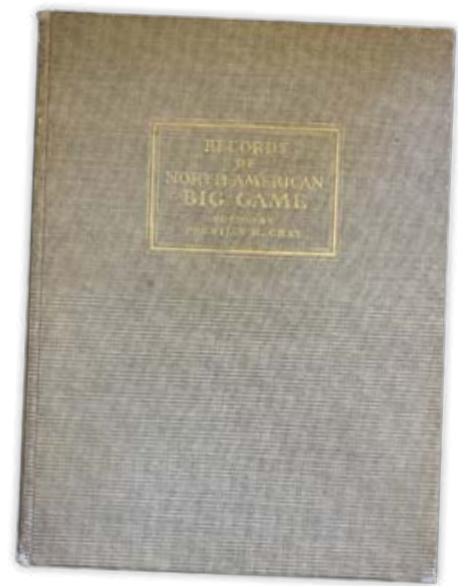
Seventy years ago, the Club standardized their measuring system, which is still in use today. Because the measuring techniques have remained constant over that time, it has established a baseline and allows standardized comparisons of big

game animals through time, which researchers can use to study wildlife management.

Dr. Kevin Monteith is an Associate Professor and Wyoming Excellence Chair with the Haub School of Environment and Natural Resources and the Wyoming Cooperative Fish and Wildlife Research Unit in the Department of Zoology and Physiology. He's also a taxidermist and a Boone and Crockett Official Measurer. He's one of those researchers utilizing Boone and Crockett records. As lead author on a paper titled, "Effects of Harvest, Culture, and Climate on Trends in Size of Horn-Like Structures in Trophy Ungulates", Dr. Monteith worked with Professional members Jim Heffelfinger, Vernon Bleich, R. Terry Bowyer, and other researchers to evaluate trends in horn and antler size

BIGHORN SHEEP *Ovis canadensis canadensis*

Length of Front Curve	Circum. at Base	Greatest Spread	Locality	Date Killed	By Whom Killed	Owner
49½	16½	23¾	British Columbia	1920	James Simpson	Dr. Henry M. Beck
46¾	15½	23	Michel, B. C.	1918	Kerquits Talher	Natl. Coll. Heads & Horns
46¾	16½	22¾	Bull River Range, B. C.	1930	C. B. D. Garrett	C. B. D. Garrett
46	17¾	24½	Oyster Creek, Alberta	1924	Martin K. Bovey	Martin K. Bovey
45½	16	22½	Banff, Alberta	Prior 1922	Indian	Harvard Mus. Comp. Zool.
45¼	15	21½	Alberta	1930	Winter killed	N. K. Luxton
44¼	16	25¼	Sun River, Montana	Prior 1911	Purchased	Lee M. Ford
44¼	14½	22¼	Panther River, Alberta	1904	James G. Brewster	James G. Brewster
44	15¼	22	Alberta	1926	Jack W. Brewster	Jack W. Brewster
43¾	14¾	23¾	Wilcox Pass, Alberta	1905	James G. Brewster	James G. Brewster
43¾	14	22¾	Alberta	1918	John D. Hazen	Natl. Coll. Heads & Horns
43	16	23¼	Kootenay, British Columbia	1926	Charles D. Copeland, Jr.	Charles D. Copeland, Jr.
42¾	15¾	23¾	British Columbia	1905	Wilson Potter	Wilson Potter
42	16¼	23½	Brazeau River, Alberta	1924	Donald Swift Hopkins	Donald Swift Hopkins
42	16		Wyoming	Prior 1896	Coll. by T. W. H. Clarke	T. W. H. Clarke
42	16	23½	Brazeau River, Alberta	1927	Donald Swift Hopkins	Donald Swift Hopkins
42	15½	23¼	Brazeau River, Alberta	1927	Capt. Paul Curtis	Capt. Paul Curtis
41¾	15¾	22	Smith Creek, B. C.	1924	J. T. M. Stonerod	Carnegie Museum
41¾	16½	23½	Montana	Prior 1905		Mrs. A. F. Talley
41¾	15	22½	Sheep Creek, Alberta	1928	Wm. N. Beach	Wm. N. Beach
41	15¼	18¾	British Columbia	1927	Harry Snyder	Cleveland Museum
40¾	16½	23¼	Bad Lands, Montana	1880	Howard Eaton	Dr. W. J. Holland
40¾	15½	22¾	Bull River, B. C.	1905	John M. Phillips	Carnegie Museum
40½	15½	22¼	Alberta, Canada	1924	Dr. H. P. Brandenburg	Dr. H. P. Brandenburg
40½	14½	21¼	Smith Creek, B. C.	1924	J. T. M. Stonerod	J. T. M. Stonerod



Now in its 14th Edition, the Club's *Records of North American Big Game* book was first released in 1932 and only contained simple measurements.

recorded from 1900 to 2008. They used more than 22,000 records among 25 trophy categories to test the idea that hunting has the potential to adversely influence the size of horn-like structures of some ungulates. So what did they find?

For starters, they found “the number of entries per decade increased for most trophy categories.” Second, and most interestingly, the general trend in size of some categories declined.

Monteith is careful to point out that records research is not absolute in its findings. “Records are not designed to be a random sample of a population,” he said. “Records can, though, represent the expression of phenotypic potential of a species over time.”

Other research coming out of the “Monteith Shop” used Boone and Crockett records to assess the effectiveness of conservation efforts for large mammals in North America. Tayler N. LaSharr’s research concluded that, “Overall, our analyses indicated that record books likely contain useful,

long-term data that can be used to detect and evaluate temporal changes in horn, antler, or pronghorn size of large male ungulates.” For more on this study, Boone and Crockett Professional Member John Organ takes a much deeper dive into this research in the article “Are Big Game Records Meaningful”, in the winter 2019 issue of *Fair Chase*.

Sometimes analysis of the records is able to provide species-specific results. In a paper published by Boone and Crockett University Programs Fellow Rebecca Cain and other researchers, they reviewed record book white-tailed deer entries in nine midwestern states. They found that 3,658 deer were entered into the Boone and Crockett records from 692 of the 856 counties within the study area. The study found that, “More record [book] deer were harvested in counties that had more high-contrast edges, less contiguous land cover, and greater variation in soil productivity.” As a result, the researchers concluded that, “These results provide information for

managers and hunters to better understand the spatial distribution of record deer and factors that are correlated with their distribution.”

BUT I DON'T WANT TO ENTER MY TROPHY

The reasons why hunters don't list their trophy in the records are many. They don't want to deal with the hassle. They don't like the idea of a measuring system. They don't want to spotlight a particular county. And for the record, the Boone and Crockett Club will only make public the county in which the animal was taken, not your secret spot. The list goes on. Yet there are perhaps just as many reasons why a hunter should enter their animal.

Think about the big picture. These records can educate and inform wildlife managers, who can then make informed decisions on habitat management, which can result in healthier populations of game and higher quality hunting experiences.

Here's another perspective. A few years ago, *Bugle* magazine published

a story written by a young hunting guide. In it, author Troy Smith writes, “So again, why enter? Why shell out \$40 that gets my bull and my name on a list somewhere? I get a sense of pride contributing to a decades-old database created and contributed to by hunters.”

The word “contributed” stands out. Hunters contribute to state fish and game agency budgets when buying a hunting license. We contribute to Pittman-Robertson funds every time we buy a new rifle or box of ammo. And we can contribute to a decades-old body of research if we choose, because, in the end, the records are not about one hunter or one animal. The records are much bigger than that. We are citizen scientists who, collectively, are part of a wildlife conservation legacy that will long outlive us. ■



When you enter your trophy into the Boone and Crockett system, keep in mind that more information is always better. If you know how old your animal was, note that on the hunt information sheet when you enter it. If you provide weather data, that helps, too. And everyone loves to know the caliber, rifle and bullet used, which allows us to put together databases like the new Method Visualizer. Ever wonder what caliber has killed the most trophy whitetails? The most popular caliber in the West? Find out with the Method Visualizer tool.