

The Hell Creek dinosaurs: Finding the world's biggest Triceratops skull

In the summer of 1963, my dad, Craig Bentley took his family dinosaur hunting in Montana. He had spent three years mapping coal fields for the US Geological Survey (USGS). Among other places, Craig surveyed Hell Creek, an area near Jordan, in eastern Montana. Hell Creek had been well known for its abundant dinosaur fossils since at least 1901.

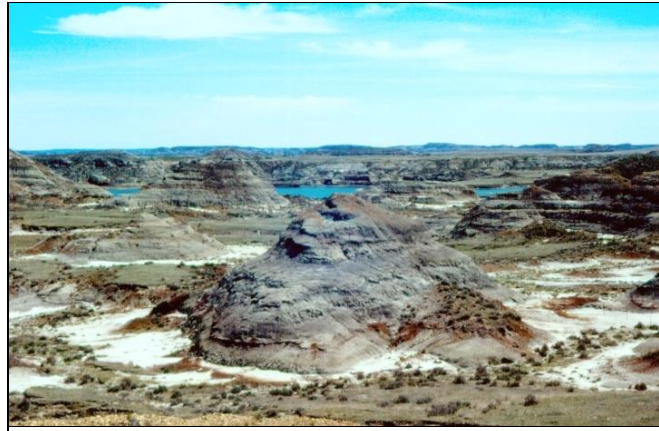
An excellent history of fossil explorations at Hell Creek (Clemens and Hartman 2014), tells how various American

museums and universities dug up exhibit-quality skeletons of large dinosaurs, like *Tyrannosaurus rex* and Triceratops, in the early twentieth century. Collecting was interrupted in 1930 by the Great Depression, and then by the Second World War. But in 1960 the USGS sent teams to eastern Montana to inventory the coal, but also to identify fossils. University and museum teams also returned to the area.

In 1963, two geologists from the USGS were working at Hell Creek: Craig Bentley and Donald Rasmussen. That summer, Bentley and Rasmussen found the stumps of two Triceratops horns poking out of the ground, with a sagebrush growing in between them (Clemens and Hartman 2014, page 47).

Craig immediately realized the importance of his discovery, so he called Jim Jensen, a paleontologist at Brigham Young University (BYU). Craig had met Jim when he was at BYU, getting his master's degree (graduated 1959). The history by Clemens and Hartman specifically mentioned that Jim Jensen was advised about the Triceratops "by his friends at the USGS" (Clemens and Hartman 2014, page 47). Jim's friends at the USGS were Craig Bentley and Don Rasmussen.

Jim Jensen, who encouraged the nickname "Dinosaur Jim," showed up at Hell Creek with a crew of colleagues and students. Craig met them with his wife, Verlyn, his dad, LeRoi, and his (then) three kids, Scott, Heather and me (Jeff). I vividly remember how one of the excited students spotted bits of bone being carried to the surface of an ant hill. He was digging away with his rock hammer when the big red ants started biting, and he jumped away.



Hell Creek fossil area



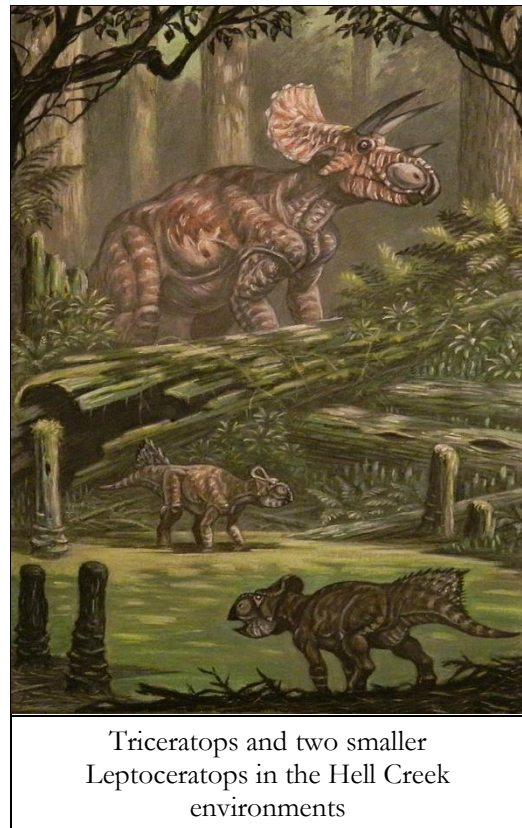
Craig Bentley (right) and John Schulte, a geologist for the Northern Pacific Railroad, examine ancient mammal teeth and bones in the conglomerate stone

Craig led Jim's team to the skull, and they began to dig a trench around it, with pick axes. My brother, Scott, went over to ask if he could help, but they told him to go away before he got hurt. The students were too excited to have time for little kids. Later Scott got really thirsty and asked one of the students for a drink of water. The kid had a canteen and a foreign accent. He only let Scott have a sip, explaining that if he drank all his water too fast in the desert he would run out and die.

My sister, Heather, recalls how the loose stone was hard to walk on. Dad came over to help Heather and our mom, easily strolling over the rugged landscape. Craig was definitely at home in the area.

Dinosaur Jim Jensen was a renowned paleontologist, but he didn't have an academic degree. Craig admired Jim all the more for that. Jim invented various modern techniques for displaying dinosaurs, with the metal supports hidden inside the bones, so the skeletons seemed to stand on their own. Craig would say that Jim had great skills with ropes and knots, which he learned in the merchant marines. Jim had held many jobs, from painter to metal worker (Jensen, no date). Jim had creatively blended his many work skills, and had become a master at packaging the heavy, fragile dinosaur skulls.

Jim had a method for finding dinosaur bones. He nurtured contacts with rock hounds, who also told him about dinosaur bones they had found (Wikipedia 2023). Craig was anything but a rock hound. He rarely brought rocks home. But he was a geologist, which must have been why Jim found Craig's story believable enough to drive 600 miles from Provo, Utah to Jordan, Montana (population 557), far from Jim's usual dinosaur hunting grounds in Utah and Colorado.



Triceratops and two smaller
Leptoceratops in the Hell Creek
environments

After showing Dinosaur Jim the fossils at Hell Creek, Craig took his family back to Great Falls, Montana, where we were living. That summer, Dinosaur Jim collected the Triceratops skull that Craig showed him. Then Jim found a second one. "One of these still ranks among the largest skulls of Triceratops yet discovered" (Clemens and Hartman 2014, page 47). BYU says it is the world's largest Triceratops skull (BYU Museum of Paleontology 2022).

The skull was so big that 10 years later I saw it on campus at BYU. It was still in its wooden crate, too big to fit through any of the doors at the university. Eventually, they made a new building to house that skull, and if you are ever in Provo, Utah, you can go see it, now on display at BYU in the Museum of Paleontology.

Craig was always proud to have known Jim. But Craig never bragged about helping to find the Triceratops at Hell Creek. He was just glad to have had an interesting experience, and to help out a friend. We also got a really cool toy out of that trip.

The talented Jim Jensen pioneered the art of making plaster casts of dinosaur bones. Jim gave Craig a museum-quality plaster cast of an Allosaurus claw. As I've said, Dad wasn't much of a collector, so he let his kids have that plaster replica. It was painted black and it was huge. We played with it for years, even after we broke the tip off it. And we never forgot our trip to Hell Creek with Dinosaur Jim.

Jeff Bentley
Cochabamba, Bolivia
2023

Acknowledgements

Thanks to Scott Bentley and Heather Joseph for reading an earlier draft of this story, and for sharing their memories with me.

Photos

The photo of the Hell Creek area today is from Wikipedia Commons, by Anky-man
https://en.wikipedia.org/wiki/File:Hell_Creek.jpg

The photo of Bentley and Schulte is by Donald Rasmussen, from Clemens and Hartman (2014), Fig. 53.

The photo of the reconstruction of Triceratops and Leptoceratops is from Wikipedia Commons, by ABelov2014 <https://www.deviantart.com/abelov2014/art/Triceratops-horribus-Leptoceratops-gracilis-607571944>

Further reading

BYU Museum of Paleontology 2022 Triceratops.
<https://www.facebook.com/BYUPaleo/photos/a.10151307806283072/10160850287113072/?type=3>

Clemens, William A. and Joseph H. Hartman 2014 "From *Tyrannosaurus rex* to Asteroid Impact: Early Studies (1901-1980) of the Hell Creek Formation in its Type Area," pp. 1-88. In, Gregory P. Wilson, William A. Clemens, John R Horner and Joseph H. Hartman (eds) *Through the End of the Cretaceous in the Type Locality of the Hell Creek Formation in Montana and Adjacent Areas*. Boulder, Colorado: The Geological Society of America. Special Paper 503.

Jensen, Jim. No date. Dinosaur Jim <https://www.dinosaurjim.com>

Wikipedia 2023 James A. Jensen https://en.wikipedia.org/wiki/James_A._Jensen