How "Neanderthal Man Hunted Cave Bears"

BY

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IN THE DRAGON'S CAVE NEAR MINTNITZ, AUSTRIA

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Among the numerous fossil-bearing caves in Austria the Drenichenhöhle, or "Dragon's Cave," in Rützstein Mountain on the Mur River in Styria, is today among the most famous. This cave is more than 1500 feet long. The entrance is 3110 feet and the farther end 3280 feet above sea level. It is divided into three sections by two great heaps of stones fallen from the roof, which walled in enormous masses of fossilized bison guano—or, as I named it, "chiropterite." A third heap of great blocks in the innermost section of the cave is older than the other two stonefalls. As Dr. Josef Schaudt and I have shown, it occurred in Pleistocene times, while the others fell during the Great Ice Age.

The first heap of stones formed an obstruction behind which accumulated a great mass of bison guano containing many hundred thousand fossil bones, chiefly of cave bear (Ursus spelaeus). In the basal layers we found bones of Ursus davidianus, a form ancestral to the later true cave bears. In the middle layers remains of the true cave bear (U. spelaeus) were very abundant and showed widely differing varieties affecting nearly all parts of the skeleton, but especially the skull and dentition. It was in these layers that the cave bears of Mintnitz reached their maximum of size and variability, while in the higher layers of the chiropterite the cave bear was represented chiefly by degenerate pigmy forms, the latest evolutionary stage of the Mintnitz cave bear before extinction. We collected, therefore, in the Drenichenhöhle near Mintnitz data for the phylogeny of the cave bear that were unusually complete and very instructive.

But man's first visit to the cave is recorded from a much earlier time, that is, during the Great Ice Age, and especially in its last interglacial period, the time when the cave bear flourished. At this time, and in this region of the Alps, Neanderthal man hunted the cave bear even into the farthest recesses of this cave. In the spring of 1921, while we were excavating just in front of the second stone barrier 1030 feet from the entrance, we uncovered two fireplaces of Neanderthal man, one above the other. Both were paved with flat limestone slabs and shrowns with a great number of broken and burned bones of cave bear, together with pieces of charcoal, and a number of flakes and very primitive artefacts of Mousterian type, which were nearly all made of quartzite brought from the gravel at the bottom of the Mur valley to the cave. 1040 feet above the level of the river.

These fireplaces were situated at the opening of a narrow passage—the
usual route of the cave bears which hibernated in the warmest (e.g., the innermost) part of the cave. After the chiropterite had been removed, Freiherr A. von Buehler-Eich followed this path of the cave bears for a distance of about 820 feet from the fireplaces to the end of the cave, and found that the only possible exit for the bears had been through this narrow defile. Here the Neanderthal hunters had stationed themselves, and tried to kill the emerging animals by striking them with long-handled clubs at the end of which sharp stones were fastened. This accounts for the numerous wounds on the skulls of the cave bears in the Drachenhöhle, later healed if the animals escaped, and always situated on the left side of the skull or lower jaw, that is, just on the side exposed to the hunters’ attack when the bears ran along the narrow passage.

In January, 1921, we excavated a little side recess of the cave near the fireplaces, which was filled with a number of skulls and other skeletal remains, chiefly of cave bears. In a space not exceeding two or three cubic meters in extent we recovered thirty skulls, some of them with lower jaws in situ, together with many isolated lower jaws and numerous other bones.

It was a remarkable fact that these bones showed a rather peculiar arrangement. We found that almost all the bones at the bottom were small—chiefly metapophyses and vertebrae; at a

![Fig. 3. An excavation party in the Drachenhöhle.—From left to right, sitting: Dr. Wilhelm Nagel, Prof. O. S. H. v. der Heide, Prof. Franz Boenigk, Standing: Dr. Hans Blumenbach and Dr. Otto Antetomas. The entrance to the lower level of the cave, and a number of rock formations, can be seen in the background.

![Fig. 4. A cascade made by cave bears on the walls of the Drachenhöhle.—The walls of the Drachenhöhle show many signs of wear, including marks made by the bears. The bear in the foreground is a typical example of a bear that had been killed by Neanderthal hunters.

![Fig. 5. A photograph taken shortly after we began excavating, showing eighteen skulls in situ.

![Fig. 6. Rock polished by the fur of the cave bears.—The animals found shelter in the hollows formed by the stones that had fallen from the roof. In the course of time the edges and corners of these blocks and of the walls were worn smooth by the fur of the cave bears, as they rubbed against the rock.}
higher level arm-bones and leg-bones predominated; then came a great series of pelvic bones; and the uppermost layer was composed chiefly of skulls and jaws. Some of the bones were badly rolled, or weathered, or gnawed by wolves; others were broken before fossilization, and one skull showed a healed wound on the left frontal, made by the sharp stone weapon of some Neanderthal hunter.

The question was whether the peculiar arrangement of the bones at this site was artificial (e.g., made by Neanderthal man), or whether it was caused by the action of running water, separating the bones according to their weight, and accumulating them in this pocket or recess, without any human intervention.

The first explanation would be in accord with the observations of Emil Bächtler in the “Drachenloch ob Vättis” in Taminatal, Switzerland, and also with the similar observations of K. Hoernemann in the cave of Petershöhl near Velden, Franconia, Germany. In the Drachenloch near Vättis, 8020 feet above sea level, Neanderthal man buried skulls of cave bear with the adjoining vertebrae in stone chests and covered these with stone slabs. In Petershöhl the skulls and other bones of cave bears were not so regularly arranged as in the Drachenloch, but were irregularly piled in a little recess of the cave.

It is noteworthy that the primitive bear-hunting peoples of northeast Asia—Gilijaks and Ainus—observe a peculiar religious veneration towards the skulls of the bears killed by them. It is not impossible that the accumulations of skulls and other skeletal parts of the cave bear in so small an area (eighteen skulls in a space of two square meters) in the Drachenlochöl near Minuta may be explained in the same way as the very similar accumulations in the Drachenloch and in Petershöhl.

Dr. Kurt Ehrenberg, who studied this matter together with other features bearing upon the whole problem of fossilization in the Drachenloch, is inclined to adopt my earlier viewpoint of 1921, namely, that the whole arrangement of the fossil remains in the recess is due only to the action of running water. On the other hand, he suggests that a curious combination of a bear skull with an ulna may be an instance of the deliberate arrangement of skeletal parts of cave bears by Neanderthal man, similar to the combination of skull and femur in the Drachenloch observed and described by Doctor Bächtler in 1921.