Hermann Schaaffhausen (1816-1893)

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Hermann Schaaffhausen was a German anatomist and anthropologist best known for his studies of the Feldhofer Neanderthal fossils. Schaaffhausen was born 18 July 1816 in Koblenz, Germany, the son of Hubert Josef Schaaffhausen and Anna Maria Wachendorf. In 1834 he began his medical studies at the University of Bonn where he studied zoology with Georg August Goldfuss, anatomy with August Franz Joseph Karl Mayer, surgery and surgical anatomy with Karl Wilhelm Wutzer, and mental illness and anthropology with Christian Friedrich Nasse. After completing his studies at Bonn, Schaaffhausen entered
the University of Berlin in 1837 and received his medical doctorate on 31 August 1839 with a dissertation titled *De vitae viribus*. The following year he passed the state medical exam and during the autumn he visited Dresden, Prague, Vienna and Munich. He spent six months studying in Paris in 1842 and also visited London in 1845. Schaaffhausen was appointed a Privatdozent (lecturer) of physiology at the University of Bonn in 1844 and was promoted to Professor extraordinarius in 1855. He was made Geheimer Medicinalrath (privy medical counsellor) in 1868. Schaaffhausen remained at the university as a professor of anatomy on the medical faculty for the remainder of his career.

Not long after joining the faculty at Bonn Schaaffhausen became involved in research in physical anthropology and the study of prehistoric humans in Europe, which he continued throughout his scientific career. He was a member of several scientific societies, including the Naturhistorischen Vereins der preussischen Rheinlande und Westphalens (Natural History Society of the Rhineland and Westphalia) located in Bonn, the Vereins von Alterthumsfreunden im Rheinlande (Association of the Friends of Antiquity in the Rhineland), and was an honorary member of the Deutsche Gesellschaft für Anthropologie, Ethnologie und Urgeschichte (German Society for Anthropology, Ethnology and Prehistory). He was made a member of the prestigious Kaiserlichen Leopoldinisch-Carolinischen Deutschen Akademie der Naturforscher on 25 November 1873. Schaaffhausen served as co-editor of the influential journal *Archiv für Anthropologie*. He was also one of the founders of the Rheinischen Landesmuseums located in Bonn. In addition to his scientific activities Schaaffhausen served as president of the Vereins der Rettung zur See (Association for Rescue at Sea).

Early in his scientific career Schaaffhausen discussed the idea of species evolving in an article titled “Ueber Beständigkeit und Umwandlung der Arten” (*On the Constancy and Transformation of Species*) published in the *Verhandlungen des Naturhistorischen Vereins der preussischen Rheinlande und Westphalens* (1853) where he declared that the immutability of species was not proven. This was several years before Charles Darwin published *On the Origin of Species* (1859). However, most of Schaaffhausen’s research dealt with prehistoric anthropology and paleoanthropology. In 1856 workmen quarrying stone from the Feldhofer Grotte in the scenic Neander Valley, near Düsseldorf in northern Germany, unearthed human bones in the cave. Johann Carl Fuhlrott, a teacher at the Gymnasium in Elberfeld who was interested in geology and paleontology, learned of the rare discovery and immediately went to recover the bones. He obtained the top portion of the skull, a clavicle and scapula, the right and left ulnae, a radius bone, the left pelvic bone, and the right and left femora. Fuhlrott noted that the bones appeared to be completely fossilized, which meant the bones might be extremely old. Recognizing the potential scientific significance of these fossils, Fuhlrott brought them to Schaaffhausen for analysis. Schaaffhausen was struck by the shape of the cranium and evidence for the great geological age of the bones. Fuhlrott and Schaaffhausen presented papers
describing the fossils and the geology of the Feldhofer Cave at a meeting of the Niederrheinische Gesellschaft für Natur- und Heilkunde (Lower Rhine Medical and Natural History Society) in Bonn in 1857. Schaaffhausen published a paper comparing the Neanderthal bones with other prehistoric human skeletons in 1858 (see bibliography below) and Fuhlrott published a paper in the Verhandlungen des Naturhistorischen Vereins der preussischen Rheinlande und Westphalens in 1859 describing the geology of the Feldhofer cave and how the bones were discovered. Fuhlrott and Schaaffhausen argued that the Neanderthal fossils dated from what was then called the Glacial Period, which would mean they lived at the same time as mammoths, wooly rhinoceros, and other animals now extinct. Schaaffhausen identified several features where the Neanderthal cranium differed markedly from modern human skulls. It possessed prominent eye-brow ridges and the long sloping shape of the cranium indicated that it belonged to what Schaaffhausen called a savage and barbarous race of ancient human. He concluded that the Neanderthals were the original wild race of humans that lived in Europe before other peoples migrated into Europe in prehistoric times.

1. Johann Carl Fuhlrott

The Neanderthal fossils generated considerable debate among anthropologists and it was not until after the discovery of additional Neanderthal fossils at the end of the nineteenth century and the growing acceptance of Charles Darwin’s theory of evolution that the Neanderthals began to be accepted as an extinct species of ancient human. Schaaffhausen continued over the next thirty years to write about the Neanderthal fossils and to investigate other prehistoric human remains in an attempt to understand the populations that inhabited Europe during the Stone, Bronze, and Iron Ages. Among the more important Paleolithic fossils that Schaaffhausen wrote about were the human jaw discovered by Karel Jaroslav Maška in the Šipka cave, in the Moravian-Silesian region of what is today the Czech Republic, in 1880 and the human cranium unearthed at Podbaba, near Prague, in 1883 and described by Anton Frisch (see Schaaffhausen 1883 and 1884). Many of his most important anthropological papers were published in as a book titled Anthropologische Studien [Anthropological Studies] in 1885. Schaaffhausen died in Bonn on 26 January 1893.
2. Schaaffhausen’s illustration of the Neanderthal cranium showing the side, front, and top views that depicted the unusual form of the cranium (the protruding bony ridges over the eye sockets, the low sloping forehead, and the long low brain case).

3. Schaaffhausen also had this artist’s reconstruction made representing his best guess at what the Neanderthals looked like. This is one of the earliest published artistic portrayals of an extinct hominid. (From “Der Neanderthaler Fund,” Archiv für Anthropologie (1888)).
Selected Bibliography:


“Ueber die Entwicklung des Menschengeschlechts und die Bildungsfähigkeit seiner Rassen.” Amtlichen Bericht über die ein und dreissigste Versammlung deutscher Naturforscher und Aerzte in Bonn (1857):


“Ueber den Zustand der wilden Völker” Archiv für Anthropologie 1 (1866): 161-190


“Die Lehre Darwin's und die Anthropologie.” Archiv für Anthropologie 3 (1868): 259-266.


Der Neanderthaler Fund. Bonn: Marcus, 1885.


Secondary Sources:


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