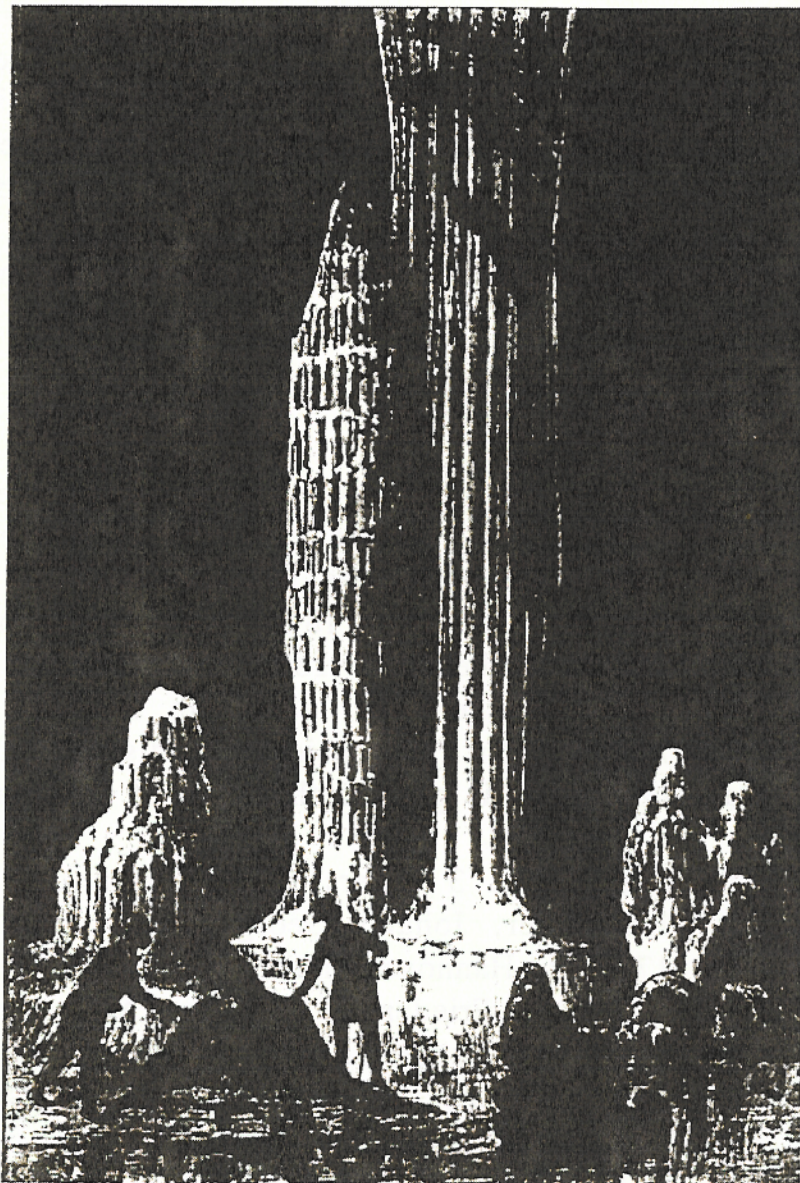


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THE LIFE AND WORK OF A LITTLE KNOWN BIOSPELEOLOGIST: THEODOR TELLKAMPF

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INTRODUCTION

One of the first names associated with the research of cave fauna at Mammoth Cave was that of Theodor Tellkamp. He not only described several of species, some of which are still valid, but also conducted a number of morphological studies. Yet very little is known about this scientist. Below I present what I have been able to gather about him. Although more needs to be known, this paper represents the first attempt to produce a narrative on his life and scientific career.

HIS LIFE AND TIMES

Theodor Tellkamp was born on 27 April 1812 in Heinde, Germany. Although Juettner (1909: 98) wrote that he had been born in Bückeberg, his birth certificate shows he was a native of Heinde, where he was christened on 19 May 1812. The family had lived in Bückeberg until sometime between 1808 or 1809 but moved to Heinde where Theodor's father had leased an estate. These two towns are about 70 km apart, a considerable distance at that time (today the village of Heinde is part of the town of Bad Salzdetfurth).

Theodor had 5 brothers and 3 sisters. The eldest of the brothers was the son of his father, Johann Georg Diedrich (b. Hannover, Germany, 2 May 1771; d. Hannover-Linden, Germany, 25 May 1846) and his first wife Johanna Friederike Catharina Margaretha Werner, whom he married on 28 August 1797. The rest of Theodor's brothers and sisters were the progeny of Johann's second wife Charlotta Rosina Christina Baum (b. 1778 Mollenfelde; d. 10 March 1857 Hannover-Linden). Theodor was the sixth child of this union.

The Tellkamp family name has been changing through time. Spellings of Theodor's earlier ancestors include Tellkamp and Tellkampff. There is also some confusion about the way Theodor

spelled his own name. In the parish register of Heinde his name is written as August Otto Theodor Tellkampf. While in America, his first name was sometimes spelled "Theodore." More confusing is his "middle" name. First of all, Germans do not use middle names (with the exception of people living in East Frisia until about 1900). Sometimes the name they use as a first name is the last one of the series of names given when baptized. That explains why he always used "Theodor" or "Theodore" as his name in America. For his middle name he sometimes used "A." which would be an abbreviation of his first christened name August (see, for example, Juettner 1909: 98, White 1884: 240.). In the only letter written by Theodor that I have been able to locate, deposited in the Archives of the Museum of Comparative Zoology at Harvard, he spells his name "Theo A. Tellkampf." Yet the "G." as a middle name appears in a number of sources.

Why did he feel compelled to create a "middle" initial for himself? It was not very unusual for Germans coming to the U.S. to add a middle initial in order to "Americanize" their name. An example was Carl H. Eigenmann, another German by birth and one of the most prolific authors on cave fishes who added an "H" as his middle initial (Romero 1986).

Theodor attended the gymnasium (high school) at Hannover and studied Medicine at Göttingen until the summer of 1838. A 26 August 1838 letter from Adolph Tellkampf (the eldest brother) to Johann Ludwig (another of Theodor's brothers) states that Theodor had studied Medicine in Göttingen until the summer of 1838 and intended to go to the University of Jena in the Fall of 1838 to do his doctorate. The University of Jena has no information about him. He attended the University of Göttingen from 28 October 1831 until February 1833. He was a student in the Faculty of Philosophy (where the natural sciences were taught) and studied physics. According to White (1884) he obtained his M.D. at the University of Würzburg, Bavaria, in 1838. His doctoral dissertation was titled "Beitrag zur Lehre der Hautkrankheiten" (On skin diseases) but it was dated as published in Vienna in 1839. During my initial investigations I thought that he might have graduated from the University of Vienna not only because the place of the publication of his doctoral ("inaugural") dissertation but also because of two

other factors: one, the University of Vienna had one of the most prestigious medical schools in the world at that time, with very strong morphological leanings (the kind of things Theodor emphasized in his papers on cave fauna); the other is that he had a brother, George Hermann Daniel Tellkampf, a merchant, who also had lived in Vienna since at least 1831.

According to the University of Würzburg, Theodor's dissertation was published in Vienna in 1839. However, the registrar of the University of Vienna did not find any record of Theodor attending that institution nor can a copy of his dissertation be found in its library.

The question, then, is why was his dissertation published in Vienna if he did his M.D. studies at Würzburg? It is possible that he may have got his degree from Würzburg in 1838, but because of the time when it was printed the date on his dissertation is 1839.

Among Theodor's siblings, one achieved notoriety - his brother Johann Ludwig (Louis) (b. Bückeberg, Germany, 28 January 1808; d. Berlin, 15 February 1876). Johann was a lawyer of international reputation who arrived in the U.S. in 1838 and taught political economy at Union College, Schenectady, N.Y. until 1843 when he went back to Germany. He returned to the U.S. again in 1844 where he occupied the Frederick Gebhard Chair at Columbia College (today Columbia University) until 1847 when he was replaced temporarily by Theodor until Columbia found a permanent replacement (Anonymous 1843, 1876, Danton 1946). He studied the American institution of prisons. Maybe that is why Theodor published a book on the health of prisoners (Tellkampf 1844d).

Ludwig returned to Germany in 1884 by invitation of the King of Prussia and was appointed Professor at the University of Breslau. In 1855 he became a member of the House of Lords ("Herrenhaus") of Prussia (among other parliaments in Germany) and was regarded as the leader of the liberal party in that aristocratic body. Another of Theodor's brothers, George Hermann Daniel Tellkampf (b. Heinde, Germany, 29 January 1810; d. Hannover, Germany, 23 November 1893), also lived in the U.S. until 1886. He was a stockbroker in New York.

Theodor traveled to America for the first time in 1839. He sailed from Bremen to New York on board the ship *New York*. Instead of staying in New York with his brothers, Theodor went to Cincinnati where there was a sizeable German colony and where his services as a doctor may have been very welcomed. He lived there until 1843 where he "spent much time traveling and studying" (Juetner 1909:99). Cincinnati provided him with a location much closer to the Mammoth Cave than New York. He returned to Europe in 1843 and in 1844 he was offered (but declined) a Chair at the University of Berlin and that same year he returned to America and lived in New York until 1880. That year he returned to Germany and died on 7 September 1883 in Hannover.

Little is known of Theodor's descendants. He married Marie von Roth in 1858, who died the following year in New York, but nothing else is known about her. He also had one son named Georg Tellkampf, born in New York in 1858, who later became a physician. There is a record of Georg traveling from Hamburg to New York in June 1876. He was a student at that time, 19 years old. Another source mentioned him living as a physician in New York (year unknown) (Kuwert, pers. comm.).

SCIENTIFIC WORK

Theodor published some of the earliest morphological descriptions of the first cave fish reported in the scientific literature, *Amblyopsis spelaea*. He contributed detailed descriptions of this species and concluded that its eyes and those of blind cave crayfishes had become rudimentary as a result of disuse:

'While it is true, in general, that all animals retain their essential form, and that no species passes over into another by transformation, we know that less material changes of form are produced by external influences such as changes in climate or food, lasting though many generations of the same species'.

For Tellkampf the original, unmodified species was still a mystery. Therefore, he did not want to settle this issue until "such species,

corresponding with them in all essential points, are found" (Tellkamp 1844b: 393).

Theodor also described two members of the Class Arachnida. In 1844 he described the opilion *Phalangodes armata* new genus, new species, from Mammoth Cave. Both taxa are still valid and the genus became the type for the subfamily (Phalangodiinae), family (Phalangodidae) and superfamily (Phalangodoidea). Also in 1844, Tellkamp described *Anthrobia monmouthia*, new genus and new species of spider. Keyserling in 1862 corrected the spelling of the specific name to *mammouthia*. This genus and species are still considered valid and are placed in the family Linyphiidae.

Other valid species named by Theodor are two beetles, *Ptomaphagus hirtus* and *Neaphaenops tellkampfi*, and the eyeless crayfish *Oreonectes pellucidus*.

Theodor was frequently cited by contemporaries studying the Mammoth Cave fauna such as Jeffries Wyman (b. Chelmsford, Middlesex, Massachusetts, 11 August 1814; d. Bethlehem, New Hampshire, 4 September 1874), Alpheus Spring Packard, Jr. (b. Brunswick, Maine, 19 February 1839; d. Providence, Rhode Island, 14 February 1905), and Frederic Ward Putnam (b. Salem, Massachusetts, 16 April 1839; d. Cambridge, Massachusetts, 14 August 1915). He also belonged to the major scientific societies of his time. By 1844 he appears as a member of Lyceum of Natural History of New York (Winsor 1991: 108), the predecessor of the New York Academy of Sciences. In 1848 he was inducted as a fellow of the Academy of Medicine of New York, the year the Academy was founded.

After his brief return to Germany and establishment in New York as a physician, he apparently abandoned the study of cave fauna altogether. He may still have had some interest in natural history. In the Archives of the Museum of Comparative Zoology, at Harvard, there is one letter by "Theo A. Tellkamp" to William Greene Binney (b. Boston, Massachusetts, 22 October 1833; d. Burlington, New Jersey, 3 August 1909) a malacologist graduated from Harvard. In this letter dated 14 Dec. 1867, Theodor discusses ascidian (sea squirt) anatomy but says that he is in no position to help Binney

with his research. His name and New York address appeared in the Naturalists' Directory, part I, 1865, edited by F.W. Putnam (p. 28.) and described him as an expert in "Ascidians, Histology."

Theodor also achieved certain notoriety as a physician. For example Heinrich Schliemann, who discovered the ruins of Troy, says that he used a formula based on quinine devised by "Tellkampf, the German doctor from New York" in order to fight fevers (Schliemann 1995).

As far as I can tell, this is the first biography on Theodor Tellkampf. Some biographical notes have been published as short obituaries in medical journals, some of them inaccurate and never with any reference to his speleological work.

ACKNOWLEDGMENTS

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Corrigenda - This picture was mistakenly added by the publisher. It actually corresponds to James E. DeKay. There is no known picture of Theodor Tellkamp.



Only known likeness of Theodor Tellkamp

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1847. Proofs that the periodic maturation and discharge of ova are, in the mammalia and the human female, independent of coition, as a first condition of their propagation (also titled Tracts on generation) translated with Chandler Robbins. Original title "Beweis der von der Begattung unabhängigen periodischen Reifung und Loslösung der Eier der Säugethiere und des Menschen" by T. L. W. Bischoff. New York: Samuel S. & William Wood. 65 pp.

TAXA DEDICATED TO HIM

Neaphaenops tellkampfi is a troglobitic ground beetle who feeds exclusively on cave cricket eggs, which it sniffs out and digs up.