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After nearly a year of detective work, a team of researchers has determined the identity of the young girl in the casket discovered in the back yard of a residence in San Francisco's Lone Mountain Neighborhood in May of 2016.

Who was she?	How did she die?
Her name was Edith Howard Cook, the second born	Funeral home records indicate the cause of death
child and first born daughter of Horatio Nelson and Edith Scooffy Cook. She died on October 13, 1876,	was "Marasmus." Marasmus was a term used in the 1800s for severe undernourishment, a condition
at age of two years, ten months and 15 days, and was	which could have had a number of underlying
buried in family plot in the Yerba Buena section of	causes, unknown or not fully understood at the time.
the Odd Fellows Cemetery on October 15, 1876.	,
	Given what is known today about late 1800s urban
[More about the Cook Family]	living, an infectious disease is the most likely cause
	of her marasmus. [More about this]
How was she discovered?	What happened then?
A contractor doing remodeling work on the residence of John and Ericka Karner in the Lone	Through the Office of the Public Administrator, the Karners were put in touch with Elissa Davey,
Mountain neighborhood of San Francisco uncovered	founder of the Garden of Innocence, who arranged to
the casket while excavating a section of their back	take custody of the young girl. She then arranged for
yard. The Medical Examiner was notified and, after	transportation and care of her in her original casket
opening the casket, determined that further	until reburial could be arranged. A new casket was
disposition of casket and the young girl inside was	built, into which the original casket was placed.
the responsibility of the Karners.	
The casket was made of metal, 37 inches in length,	The young girl, nicknamed "Miranda Eve," was
with two viewing windows in the lid. It was tightly	reburied at Greenlawn Memorial Park in Colma, CA,
sealed, thus preserving the body of the young girl it	on June 4, 2016, at a service attended by about 140
held.	people.
[More about the casket and its contents]	[Another memorial to be held in June]
How did she get the name "Miranda Eve?"	How did she wind up in the Karner's back yard?
	She was buried there - before it was a back yard, of
The Public Administrator provided the name "Eve."	course. All the residences in that neighborhood were
The Karner's two young daughters chose the name "Miranda"	built on the former site of a cemetery, owned and
"Miranda."	operated by the Independent Order of Odd Fellows.
	The cemetery accepted burials from 1865 until about
	1902. The interred were exhumed in the early 1930s
	and transferred to Greenlawn Cemetery in Colma,
	CA. For unknown reasons, Edith/Miranda was left

behind.

How was "Miranda Eve" identified as Edith Howard Cook?

The research effort was complex, consisting of four general phases which often overlapped. A successful completion of each was needed to obtain a 100% positive identification.

Phase 1: Determining which part of the vacated cemetery corresponded to the Karner's residence.	Phase 2: Finding likely candidates for "Miranda Eve" buried in those sections who met certain criteria:
A map or diagram of the cemetery as it existed when burials ceased was sought initially. None was found. A scalable plan for the development of the cemetery, dating to 1865, was discovered at the Bancroft Library at the University of California, Berkeley. Using that as a base, researchers initially identified two sections of the cemetery most likely corresponding to the location of the residence. [More about this] Subsequently, several historical maps, including original cemetery section drawings, were digitally layered atop one another and cross-referenced against photographs to reveal a clearer picture of which family plots likely intersected with the location of the discovery.	Examinations of "Miranda Eve" before reburial suggest a child aged two to four years at death. DNA preserved in her hair showed she was female. Coffin style indicates burial about 140 to 150 years ago. Any potential candidate had to qualify on all three counts. Surviving cemetery records and archived obituary notices, where available, were used to research these criteria. In addition, she would have had to have been buried in a casket matching the one which was discovered. Confirmation of this information depended on finding surviving funeral home records.
Phase 3: Researching family histories of the most likely candidates to find potential living descendants for possible DNA match.	Phase 4: Obtaining DNA samples from the descendants for comparison with DNA extracted from the sample of hair taken from "Miranda Eve"
Research on interments from the two cemetery sections narrowed the search to two highly likely candidates. Standard genealogical search methods were used to find and examine a large number of records for relevant information, most of which came from online sources of genealogical records. This was a labor-intensive effort. More than a thousand hours of research was logged by three primary researchers (occasionally aided by additional volunteers) to complete this phase of the project. Living family descendants were eventually found for both candidates.	Both descendants were contacted and agreed to provide DNA samples for comparison. One of these showed a good match to DNA recovered from the hair of "Miranda Eve."

More about the part DNA played in solving this mystery.

The effort to collect and analyze DNA was one of the essential areas of research necessary to finding the answer to the question that motivated this project: Who was the young girl found in the Karner's back yard?

DNA and other biomolecule analysis served two important purposes:

To obtain information about the health and likely cause of death of Edith H. Cook, as well as about likely ancestral origins.

Strands of hair were obtained from "Miranda Eve" before her reburial for DNA testing. Analysis of nitrogen isotopes, conducted at the University of California, Davis, revealed that she began experiencing undernourishment approximately 3 months before her death. This is consistent with a chronic illness (unlike, for example, smallpox or an accident where death was typically within weeks), and with the cause of death of "marasmus" indicated in funeral home records for Edith Howard Cook found later.

Whatever the specific cause of her illness (a bacterial infection seems most likely), it is certain that "Miranda Eve" died from the "wasting" which was characteristic of a diagnosis of "marasmus." Her hair was also analyzed for traces of medicines, such as morphine and cocaine, which were common components of medicines in the late 1800s, but existence of those compounds could not be documented.

Analysis of nuclear DNA, which is inherited from both parents, confirmed that "Miranda Eve" was a girl (no Y chromosome DNA fragments are present), and suggested ancestral origins in Western Europe. Her complete mitochondrial DNA (inherited only maternally) was assembled, and it was found that "Miranda Eve" carried the I1a1e haplotype, most common on the British Isles.

To obtain a certain identification of Edith H. Cook.

At the University of California, Santa Cruz, an analysis was performed comparing the DNA extracted from the hair sample with that obtained from the living male descendant of the second candidate, Edith Howard Cook. Those samples provided a clear match.

The living relative is Peter Cook, Edith's grand-nephew. Peter Cook is a direct descendant of her older brother, Milton H. Cook. He lives in the Bay Area.

DNA was extracted from the "Miranda Eve" hair samples in the clean room facilities at the university's Paleogenomics lab using standard ancient DNA techniques. After sequencing, data was collected from about 10% of Miranda Eve's genome. The data show typical patterns of old or ancient DNA. The DNA fragments were short – about 50 basepairs each – and showed evidence of chemical degradation.

The DNA sequence from Peter Cook was compared to the "Miranda Eve" data by examining the rate of matching at positions of rare DNA variants across the genome. Several long, contiguous sections were found where Peter Cook and "Miranda Eve" match at these rare genetic variations at a rate expected for two people who share a very recent common ancestor. The "Miranda Eve" data had no such matching segments to dozens of negative controls, i.e., DNA data from unrelated people. Further analysis of the matching regions confirmed that these segments are *bona fide* Identity By Descent regions – regions of the genome co-inherited from the same person, i.e., the parents of "Miranda Eve."

How many people were involved in the search for Miranda Eve's identity?

A total of 34 volunteers provided valuable services, time, and expertise in a variety of areas throughout this project. A complete list can be found here. **Principal researchers were**:

Elissa Davey, Genealogist and Founder of Garden of Innocence, Vista, CA

Dave Frederick, Genealogist and Cold Case Investigator, Billings, MT

Bob Phillips, Genealogist and Writer, Seattle, WA

Alex Snyder, Investigative Historian and Transportation Planner, San Francisco, CA

Dr. Jelmer Eerkens, Professor of Anthropology, UC Davis, CA.

Dr. Ed Green, Professor of Biomolecular Engineering, UC Santa Cruz, CA

What's Next? New Mysteries; New Research Projects

In solving the Miranda Eve mystery, the research team has discovered other areas for exploration related to the Odd Fellows Cemetery.

Some of the researchers involved in the Miranda Eve project are currently working to identify the remains of three individuals previously found on former Odd Fellows Cemetery property, including the remains of a child found during construction work in 2000.

Memorial Service To Be Held on June 10, 2017 Greenlawn Memorial Park, 1100 El Camino Real, Colma, CA.

The memorial service will begin at 11:00 am. It will be open to the public. Driving directions and transportation information can be found here.

On June 4, 2016, a memorial service was held at Greenlawn Memorial Park. It was attended by approximately 140 strangers who came together to make sure that "Miranda Eve" received a dignified reburial. One side of a double-sided headstone was engraved with that name, the other side was left blank waiting for her true name should it ever be discovered.



The headstone, pictured here, was designed and donated by The Headstone Guys, of Fresno, CA.

Now, after nearly a year of research, the name she had when she was first interred in the Odd Fellows Cemetery, the name known to her grieving family and the others at her graveside, has been restored to her.

In honor of Edith Howard Cook, another memorial service will be held on *June 10*, *2017*, at the same site. The other side of the headstone, empty for over a year, will be completed with her name and this imaginative portrait of her, created by artist Jennifer Onstrott Warner of Fairy Tale Portraits:



The Cook and Scooffy Families

Edith Howard Cook was born on November 28, 1873, into two families prominent in the worlds of commerce and society in San Francisco, in the last half of the 19th century and well into the 20th. Her father, Horatio Nelson Cook, born in Delaware in 1840, was one of several children of Matthew M. and Catherine Cook. He was from England; she from Nova Scotia. They brought the family to San Francisco from the east coast around 1860. Matthew M. Cook died in 1869. Catherine Cook lived until 1887. They were both buried in the Cook family plot in the Odd Fellows Cemetery.

Edith's mother, Edith Scooffy Cook, was born in 1851 in San Francisco into one of California's pioneer families. Two of her siblings who died young are buried in the cemetery at Mission Dolores. Her father, Peter M. Scooffy, was born in Greece and immigrated to the United States as a young man. About 1845 he married Martha J. Bradley, who was descended from one of the earliest established Virginia families. They lived for a time in New Orleans, and then made their way to San Francisco, where he became a successful merchant. Peter M. Scooffy was an original member of the Society of California Pioneers. Peter M. Scooffy died in 1875. Martha J. Scooffy lived until 1906.

Horatio Cook and Edith Scooffy married in 1870 and soon took up residence at 635 Sutter St., in San Francisco. With his father, Horatio Cook established M.M. Cook & Sons, which specialized in the tanning of hides and manufacture of leather belting. He also served as Consul for Greece. He died in 1891 at the Cook home in Belvidere, Marin County, CA, and was interred in the family plot in the Odd Fellows Cemetery, with his father, mother and beloved daughter, Edith, as well as other Cook family members. His wife, Edith Scooffy Cook lived until 1919. She was interred at Holy Cross Cemetery in Colma, CA.

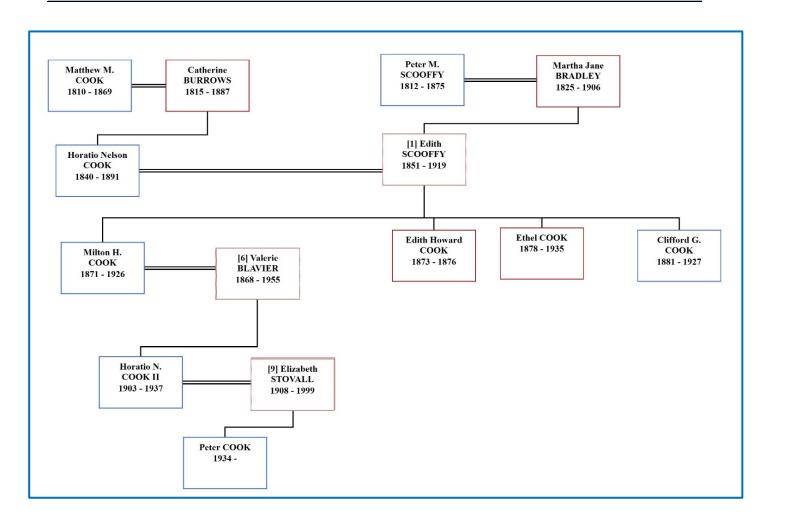
Besides Edith Howard Cook, who died on October 13, 1876, Horatio Nelson and Edith Scooffy Cook had the following children:

Milton H. Cook: Born in 1871. After his father's death, he continued to manage the family business, the H.N. Cook Belting Manufacturing Co. He died in 1926. Peter Cook, the living Cook family descendant found by the Miranda Eve researchers, and who made the identification of Edith Howard Cook possible, is the grandson of Milton Cook and the grandnephew of Edith Howard Cook.

Ethel Cook: Born in 1878. She was a well-known figure in San Francisco society. Declared, by a Russian nobleman, to be the most beautiful woman in America. She married twice, the second time to a member of another prominent San Francisco family, the Currans. She died in 1935.

Clifford G. Cook: Born in 1881. He joined his older brother in the management of the family business. He died in 1927.

Ancestral chart showing the direct line from Cook and Scooffy families to Peter Cook, a living descendant.





Peter Cook, who was identified as a direct descendant of the Cook and Scooffy families, shown last year preparing to provide a DNA sample. The analysis of that sample was the final step in solving the "Miranda Eve" mystery – the identification of Edith Howard Cook as her true identity.

Mr. Cook is the grandnephew of Edith and the grandson of her brother Milton. He was about 3 years old when his father, Horatio N. Nelson II, died. He now lives in Marin County.

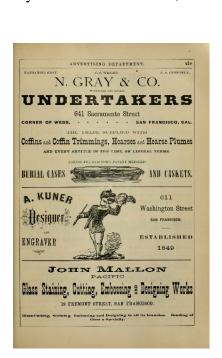
The Casket and its Contents

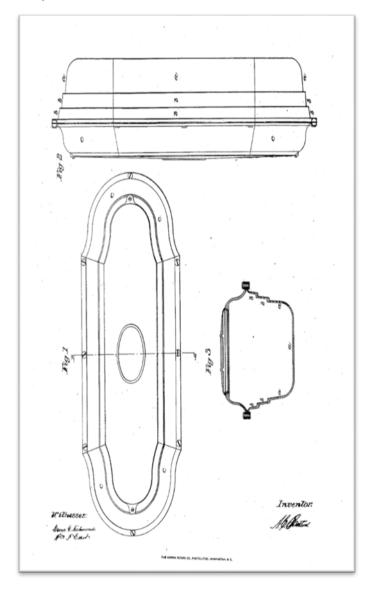
The casket excavated in the Karner's backyard was a child's-sized metallic casket, tentatively identified as a design patented by Amos C. Barstow of Providence, Rhode Island. This was later confirmed by records from the mortuary engaged for the funeral and burial arrangements for Edith Howard Cook, N. Gray & Co. Undertakers, located at 641 Sacramento Street in San Francisco. Gray & Co. was also advertised as the sole agent for Barstow caskets in San Francisco.

Barstow-style caskets are easily distinguishable from other caskets of the era by their ogee-shaped ends and their unique base constructed from overlapping metallic ribs. The design and construction of the casket resulted in an air tight seal, ensuring that its contents would be preserved for some time. One advertisement promised "perfect protection from water and vermin."

Barstow patent caskets appeared to have enjoyed a long production run. The earliest known advertisement dates to 1860. The casket was manufactured by the Barstow Stove Company. Production rights were later sold, and while it is not known when the last Barstow was made, it is known that N. Gray & Co. sold them well into the late 1890s.

In every known advertisement, the casket appears exactly the same.







A mortician who assisted with preparations for reburial examined the contents of the casket and identified the body as that of a young girl. She was clothed in a white christening dress, embellished with elaborate lace work that appeared to have been created by hand. On her feet were shoes, ankle high, with leather soles, similar to moccasins (known as "baby booties"). Tiny purple "False Indigo" flowers were weaved in her hair. More flowers were found in the form of a long necklace, evocative of a rosary in design, which went around her wrist, up her right side and over her right shoulder, with a flower cross at the end, which rested on the girl's chest. Also, four or five roses on stems, eucalyptus leaves, baby's breath and some greenery had been placed on the body, starting just above her waist, and a Nightshade flower was placed in her right hand. Her left hand was not visible. There were no toys or other personal objects found in the casket.

The 1865 Odd Fellows Cemetery Plan

To determine on which part of the old cemetery the Karner's residence had been built, a map or similar document was sought that would show the arrangement of the Odd Fellows Cemetery at its most developed, ideally as it existed when it accepted its last in-ground interment. That document was not found. However, the original 1865 plan for the cemetery was discovered at the Bancroft Library at the University of California, Berkeley. The research team obtained a copy, which provided a scalable map used to create the overlays which identified the section of the cemetery corresponding to the Karner's backyard, where the casket was discovered in May 2016.



Elissa Davey, leader of the Miranda Eve research team, found a bound copy of the plan at the San Francisco Public Library.

What was not known was how much of the plan had been executed as designed. Indeed, as the researchers sifted through the thousands of pages of cemetery records, it became apparent that many sections not on the original plan had been created as the cemetery grew, and a few that were planned never came into being. It turned out that the section that held Edith Howard Cook had been developed according to the 1865 plan.