



The Deafness History of Martha's Vineyard

Rinze A Tange*

Department of Otolaryngology-Head and Neck Surgery, Maastricht University Medical Center, the Netherlands

***Corresponding Author:** Rinze A Tange, Department of Otolaryngology-Head and Neck Surgery, Maastricht University Medical Center, the Netherlands.

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Abstract

A recessive trait of a congenital disease can spread in an isolated population. In this article we focus on the history of the spread of recessive deafness. A large deaf population existed in an area in Kent in the 16th century. The high number of deaf people was caused by a genetic mutation at the time, which resulted in a recessive gene for deafness, which was passed on for generations. Because of religious disagreements, Father John Lothrop had to leave England and moved with his Puritan congregation to the new world with a number of deaf families. They landed in Massachusetts and moved to the island of Martha's Vineyards. For nearly two centuries the population on the island was extremely isolated, which led to a sharp increase in congenital deafness. In the 19th century, the deaf population on Martha's Vineyard was very high compared to mainland America. The deaf were well integrated in society due to the use of sign language. The deafness on Martha's Vineyard began to end due to the expansion of the number of gene pools and the increase in the number of immigrants. At the beginning of the 20th century there were few islanders left with congenital deafness.

Keywords: History; Hereditary; Martha's Vineyards

Introduction

As a result of inbreeding, autosomal recessive diseases can occur relatively more often. In isolated areas or in certain religious communities the chance of these congenital disorders due to inbreeding is greater. An example of autosomal recessive deafness from the past was the hereditary deafness on the island of Martha's Vineyard that lies below Boston on the American east coast. After settlers from England settled on the island in the sixteenth century, a generation emerged in the following centuries, with deafness occurring in almost every family. In this article the special deafness history on the island of Martha's Vineyard is highlighted.

Sir George Downing and Samuel Pepys

Sir George Downing (1623-1684) (Figure 1) was a soldier, statesman, diplomat and spy under Oliver Cromwell. His name

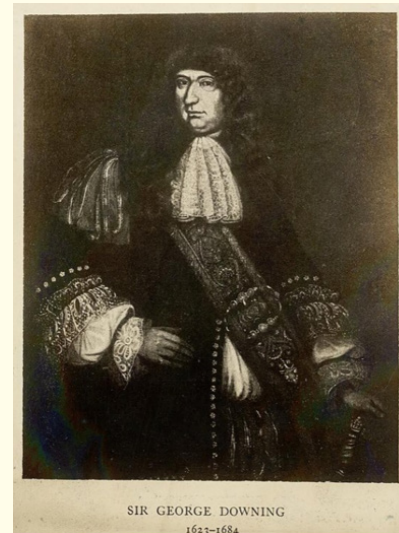


Figure 1: Sir George Downing (1623-1684).

is still connected to the street in London that he had built and is now known as the official residence of the British prime minister. In 1664 Downing was influential in England and convinced the Dutch to exchange New Amsterdam, their colony on Long Island, for Suriname, a British colony in South America. As a child, George Downing's parents, afraid of the plague in London, sent him with his brother to a school in Maidstone, Weald-Kent. He grew up in a community where there was a lot of hereditary deafness among the locals. In this way Downing learned the local sign language (Old Kentish Sign Language). The London writer Samuel Pepys (1633-1703), who was funded by Downing while studying in Cambridge, describes in one of his diaries an incident during a dinner on November 9, 1666 with George Downing. Downing had a sign language conversation with the deaf waiter about the news of the big city fire in London in September 1666. With the experience of the deaf during his stay in Weald Kent, Downing was able to build a network of dozens of spies who worked for him. These deaf spies could pass on information that was not understood by hearing. The hereditary deafness in the county of Kent was thus a solution for Downing in the espionage for England.

Weald and John Lothrop

Part of the county of Kent in England is known as Weald. In the 15th century this region had a very large deaf population and as a result, both the deaf and hearing residents used a sign language. The high number of deaf people in Weald was caused by a genetic mutation, which resulted in a recessive gene for deafness that was passed on for generations. In addition, there was a high incidence of mixed marriages and inbreeding because the spouses often came from the same neighborhood of the city. The pastor in the region at the time was John Lothrop (1584–1653) (Figure 2) from Egerton. He was a strong proponent of the idea of the separation of church and state ("Freedom of Religion"). The proponents of this idea were then considered heretics in England. Lothrop was arrested in 1632 for not observing the oath of allegiance to the established church. He refused to give up his religious beliefs and was imprisoned. In 1634 he received his freedom on the condition that he would immediately leave the country permanently. He accepted the condition and together with members of his congregation and their servants they moved to the New World.

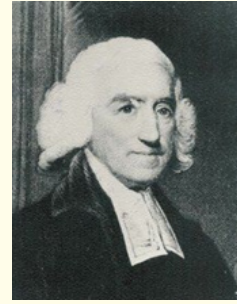


Figure 2: John Lothrop (1584–1653).

The crossing to the new world

Among the congregation, who moved with John Lothrop, were the Lambert, Tilton, Brown, West, and Skiffe families. It was known that deafness occurred in those families. The group sailed with the ship "the Griffin" towards Boston, Massachusetts on the American east coast. Due to harsh weather conditions, the ship ended up in Plymouth with around 200 religious dissidents. A few days after arriving on September 18, 1634, the Lothrop group travelled to the village of Scituate. After disagreements within the congregation, the Weald group moved from in 1639 to Barnstable, a village in the south near the island of Martha's Vineyard. In 1669 this group eventually went to Martha's Vineyard (Figure 3). The first generations of this settlement on the island had an average of 9.1 children per family. The first registered deaf person at Martha's Vineyard was Jonathan Lambert. Jonathan was born deaf in 1657 and he married Elizabeth Eddy in 1683. They had seven children, two of whom (Ebenezer, 1688 and Beulah, 1704) were deaf and dumb. Lambert bought a piece of land from the native American Wampanoag Indians for £ 7 in 1694. This piece of land is still called Lambert's Cove. Jonathan Lambert was active as a carpenter and farmer and communicated through sign language. He died at the age of 80.

Deafness on Martha's Vineyard

Around 1700, the population of Martha's Vineyard consisted of around 400 people. Immigration to Martha's Vineyard stopped after 1710 and the island became extremely isolated. As a result, many family got married, creating inbreeding with a large increase

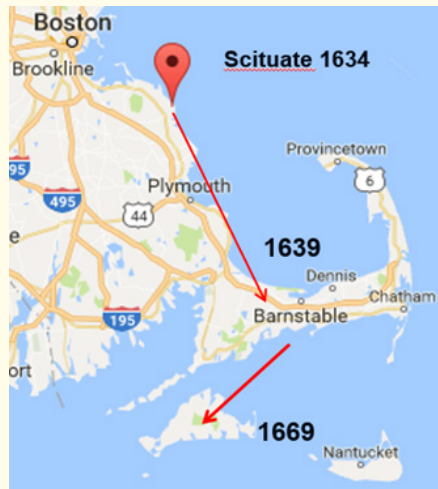


Figure 3: The trip to Martha's Vineyard.

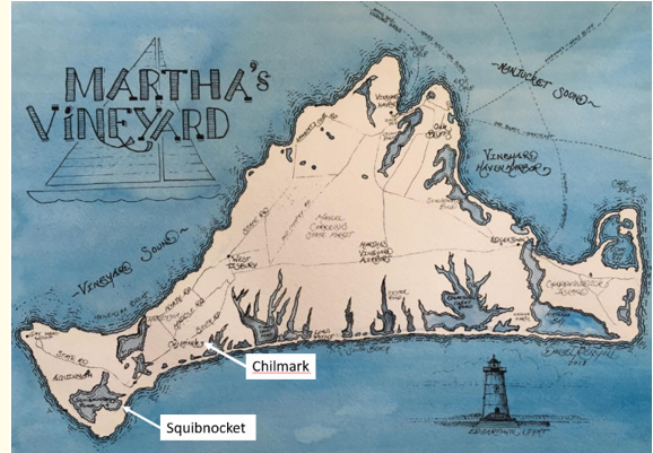


Figure 4: The area with the most deaf people on the Island.

in deafness in particular. The Lambert, Tilton, West and Skiffe families produced the largest share of deafness at Martha's Vineyard. All four families had deafness in their family tree and could be directly linked to the original settlers, who arrived from Weald in the UK between 1642 and 1710. In a later study their origins of 104 deaf persons could be traced. For over 200 years, the deaf worked and lived side by side in the rugged isolation of Martha's Vineyard. Both the deaf and hearing people communicated using sign language known as Martha's Vineyard Sign Language (MVSL). The difference in the number of deaf people per population in Martha's Vineyard compared to the rest in America turned out to be enormous at the beginning of the 19th century. At Martha's Vineyard, 1 in 155 residents were deaf, while in mainland America only 1 in 5,728 Americans was deaf. In the Chilmark region in southwest Martha's Vineyard, a maximum of one in twenty-five people was deaf, while in the hamlet of Squibnocket (Figure 4) one in four was deaf. The deaf were all well-known and respected members of the community there. Among other things, this data led the Massachusetts State Board of Health to request the cooperation of Alexander Graham Bell in 1876 in collecting and registering statistics on birth defects such as deafness. Bell was already known for his invention of the telephone but also for his expertise in the field of speech education for the deaf. He accepted the invitation and went to Martha's Vineyard, which was known to have very deaf residents.

Alexander Graham Bell on Martha's Vineyard

Alexander Graham Bell (1847-1922) (Figure 5) was the son of Alexander Melvin Bell (1819-1905). Alexander Bell's father was a pioneer in teaching deaf children. Bell studied physiology in Edinburgh and in London and in 1868 he became his father's assistant. He taught him his method of learning to speak to the deaf. Due to the death of two brothers and sisters from tuberculosis, the Bell family emigrated to Brantford (Canada) in 1871. When Bell was 25 he opened his own deaf school in Boston (Massachusetts). He teaches teachers how to work with deaf children. Bell is successful and is appointed by the University of Boston in 1873 as a professor of voice physiology. Inspired by the work of Hermann von Helmholtz, Bell started his research into the electrical transmission of sounds. In 1876, Bell filed the patent application for his telegraph studies. Together with Gardiner Greene Hubbard (father of Bell's deaf wife), he founded The Bell Telephone Company in 1877 and that company grew into one of the world's largest companies. The invitation from the "Massachusetts State Board of Health" in 1876 took Alexander Graham Bell very seriously and he started his research at Martha's Vineyard. This was the start of Bell's genealogical research into congenital deafness. Upon his arrival on the island, Bell went directly to Chilmark to study the deaf and dumb. In Chilmark, Bell heard that a certain Richard Luce Pease (1835-1888) (Figure 6) in the nearby town of Edgartown was the person who

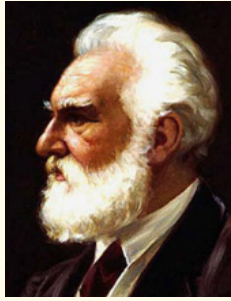


Figure 5: Rony Pedro Colanzi.

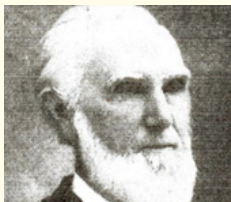


Figure 6: Richard Luce Pease (1835-1888).

could best provide him with the desired information about the deaf families. Pease member of the Webster Historical Society of Boston was a genealogist and historian who collected a lot but did not publish much. Pease's genealogical data was gratefully used by Bell. The data of all deaf persons and their family relationships were collected and processed. With this data from Martha's Vineyard and the data from various deaf institutions in the US, Bell has compiled pedigrees of many deaf families. The result of Bell's research on deafness was published by the National Academy of Sciences in book form "Memoir upon the Formation of a Deaf Variety of the Human Race" in 1883. He mapped the origins of hundreds of deaf persons and delved deep into the genealogy to discover the inheritance of deafness. He also compiled extensive tables, graphs and pedigrees about deafness. Graham Bell concluded an increase in hereditary deafness in the US and suggested measures to contain this danger. For example, he was in favour of a legal ban on the marriage of two congenital deaf people (Figure 7) and a ban on the marriage of persons of a family with more than two deaf people. He also advocated the abolition of sign language and did not advise deaf teachers for deaf children. His ideas were later used by the eugenic movement for an indication of compulsory sterilization of the deaf.

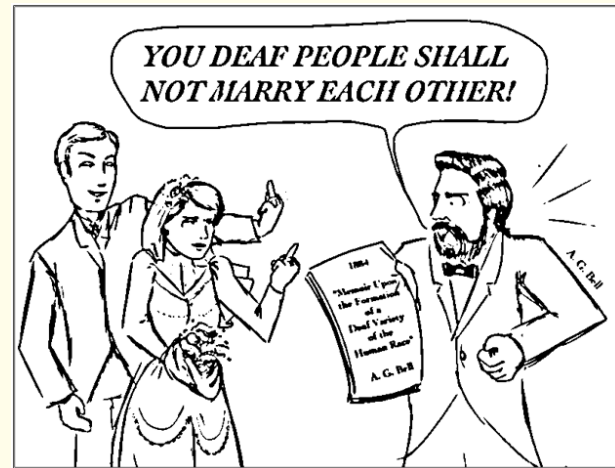


Figure 7: Cartoon on the legal ban on the marriage of two congenital deaf people

The end of Martha's Vineyard deafness history

In the second half of the 19th century, the number of newly born deaf people gradually decreased. This had various reasons. In 1817 Thomas Hopkins Gallaudet, Laurent Clerc and Mason Cogswell had founded the American School of Deaf in Hartford (Connecticut). And from that time the deaf children of Martha's Vineyard went to this school on the other side of the mainland island. This created relationships with a wider hearing population. After 1840, people from the island were attracted to California and moved. At that time, fourteen deaf children were born in Chilmark, with a population of around 350. Thirty years later, the population of the city was about the same, but only one deaf child was born. The deafness also ended because the gene pools on the island were eventually expanded. Towards the end of the nineteenth century, "summer travelers" began vacationing at Martha's Vineyard. The visit of US President Ulysses S Grant to the island in 1874 had contributed to the flow of tourists to Martha's Vineyard, with the result that members of the island community had more intimate contact with these off-islanders. In addition, Portuguese immigrants settled on the island, further expanding the gene pool. Around the turn of the century there were 15 deaf people on the island, but in 1925 there were only four. The last family with congenital deafness on Martha's Vineyard was the West family. George (Josie) West and his deaf wife Sabrina West-Rodgers (Figure 8) lived their entire lives

in Chilmark, where Josie worked as a farmer. When Jose West died in 1945, his daughters Katie West and her sister Eva S. West were the only last hereditary deaf in Martha's Vineyard. Eva died in 1951 and her sister Katie in 1952. In 1980 there were four deaf people on the island, none of whom had hereditary deafness. The typical sign language (MVSL) used on the island disappeared in the 1970s. The deafness at Martha's Vineyard has shown that the recessive trace of a condition can be spread in an isolated one population. The Martha's Vineyard deafness history has been unique example of this and will probably never be repeated [1-15].



Figure 8: Deaf Josie West and his wife Sabrina Painted by Thomas Hart Benton (The lord is my shepherd -1926).

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