

Embalming

The embalming of bodies is perhaps the most environmentally detrimental burial practice. Embalming is a process in which two gallons of formaldehyde-based preservation fluid is pumped into a corpse in order to maintain the deceased's appearances for public viewing. The aim of an embalmer is to make the body look peaceful, as though the individual were sleeping rather than dead. This is meant to take the edge off of death and to allow loved ones to say goodbye to the person they have known. Embalming also allows the burial process to be prolonged, enabling friends and family to plan ahead for the viewing and funeral ceremonies. There are certainly benefits to this system, but embalming practices are ultimately toxic and

Replenish Plus



FORMALDEHYDE

MAY CAUSE CANCER
CAUSES SKIN, EYE AND
RESPIRATORY IRRITATION

AUTHORIZED PERSONNEL ONLY

unnecessary. A study conducted by the Journal of the National Cancer Institute proves that formaldehyde is a carcinogen, stating that those who have worked in the mortuary industry for a substantial period of time have a higher risk of contracting myeloid leukemia. It isn't only embalmers that are at risk. When an embalmed body decomposes, formaldehyde is released into the surrounding soil, allowing for contamination of potable water due to seepage through the soil.

Issues with Tradition

Today, most traditional cemeteries require that caskets are placed in cement vaults to prevent the ground above the casket from settling as the coffins decompose. This practice reduces cemetery management costs and prevents headstones from becoming skewed. However, cement vaults are made of 1.6 tons of reinforced concrete and inhibit the natural decomposition of the corpse. In addition, since the cement industry is the most energy intensive of all manufacturing industries, this practice has significant climate change impacts.

Modern caskets are not made for efficient decomposition. Rather, nearly all of them are constructed of metal and treated wood, both of which require decades to fully decompose. It may seem sensible to keep treated materials and a formaldehyde infused body enclosed within a concrete container, but the vault does not prevent hazardous effluents from seeping into the surrounding soil due to the porous nature of cement.

By eliminating foreign, potentially toxic materials, green burial ensures that any certified green cemetery will remain in a natural state without incurring significant ecological damage. In fact, the unobstructed decomposition of the body will provide nutrients to the surrounding earth, acting as a fertilizer for future growth. Not only does such a process benefit the environment, it appeals to many individuals who find comfort in the knowledge that their death will advance other life cycles.

Green cemeteries do not allow non-native plants, plastics, metals, or polished headstones within their boundaries to reduce the potential of contamination.

History of Burial

Prior to the Civil War, embalming was a non-existent practice except in the realm of Ancient Egypt. In colonial America, when a family member passed the body would be available for viewing for a day or two as family and friends came around to say goodbye. The body would then be disposed of, either in a local cemetery or on the property of the deceased. Death was very much a part of life, and families and neighbors would take responsibility for the disposal of their loved one's body.

During the Civil War, soldiers were often killed far from their homes and therefore their families would not have the opportunity to say goodbye to the body in person. This all changed when Dr. William Beatty pickled the body of a young naval officer so it could be returned to his family. Embalming was derived from this act, and as medicine began to advance, so too did the mortuary industry. Disposal of corpses became a much more clinical and removed process, leaving families to mourn as professionals prepared and disposed of their loved ones. This cultural shift propelled the mortuary industry to reach the level of success that it has today.

From View Market

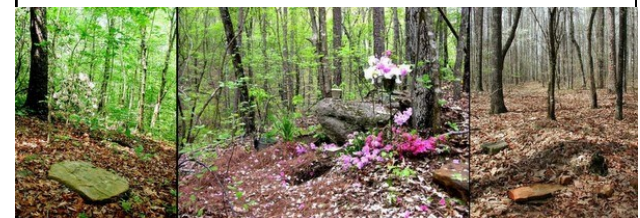


The pickled body of a soldier could be returned to his family for burial during the Civil War. The pickling process was then refined to create the practice of embalming.

Introduction

Death is a touchy subject. It seems intuitive that such an inevitable process as dying would be incorporated into our awareness that we are connected to the natural world, and yet in America, our fear and uncertainty of death discourages its prevalence in our culture. Such aversion of death tends to limit our investigation into post-mortem practices. Many people do not realize the wide range of possibilities open to them concerning the disposal of the physical body after death. In most circumstances, families of the deceased leave the body to be dealt with by morticians and cemetery workers who constitute the \$20 billion dollar mortuary industry. While in many ways it might seem natural to let the funeral home professionals deal with the disposal of the human body, today's standard burial practices can result in significant environmental detriments. In light of this information, I encourage readers to include natural, "green" burial in their funeral and burial considerations.

Garden Rant



In this image, we see three different picturesque green burial sites.

The most important components of a green burial are that only biodegradable materials are used, toxic embalming fluids are omitted, and the deceased are buried in a scenic and natural area without the erection of a traditional burial monument.

Cremation

Cremation, another popular form of burial, can also be evaluated for its “environmental friendliness.” Incinerating a body allows one’s ashes to be spread in scenic, meaningful areas, or be used in creative ways, such as in art and jewelry. Because it takes up little to no cemetery space, cremation is thought to be a very ecologically friendly process. Unfortunately, this isn’t entirely the case. While cremated remains do not pollute the environment directly, the process required to incinerate a human body to a fine ash is very energy intensive. The burning takes multiple hours at high temperatures and uses up to thirty gallons of propane per body. Additionally, if the corpse has been embalmed for viewing purposes or has any mercury fillings or other such toxic contaminants, those compounds are released into the atmosphere along with a significant amount of carbon dioxide.

Cost

2014 statistics show that a typical traditional funeral with a cement vault costs \$8,505, twenty-nine percent more expensive than 2004 figures. This value doesn’t include cemetery charges for a plot of land, so a family can expect to pay around \$3,500 on top of the \$8,505, leading to a grand total of \$12,005 in net expenses. Traditionally, families pay for a casket, embalming, a beautician, attire for the deceased for a viewing, a viewing service, the funeral service, a hearse to transport the body from place to place, a plot of land in a cemetery, expenses for digging the grave, a cement vault and associated labor costs, a headstone, a written obituary, and floral arrangements. Many of these expenses could be reduced or eliminated with green burial, leaving an average cost of \$2,000 per green burial (highest estimate currently \$5,000). Alleviating financial pressures in times of mourning is a key benefit to green burial.

Fun Facts

- Six weeks after burial, a body loses all of its moisture to the surrounding soil. In two years, the soft tissue has completely decomposed. After twenty years, all that is left of the body is a nutrient-rich soil.
- When sealed coffins were first created, many exploded after burial due to pressure caused by anaerobic decomposition.
- Burying a body in compost quickens the rate of decomposition and eliminates malodor.
- There are currently only two green cemeteries in the state of Maine: Cedar Brook Burial Ground in Limington, and Rainbow’s End Green Cemetery in Orrington.
- Ramsey Creek Preserve in North Carolina was the first ever green cemetery, established in 1988.

The Kennebec Land Trust (KLT) works cooperatively with landowners and communities to conserve the forests, shore lands, fields, and wildlife that define central Maine. KLT protects land permanently, offers opportunities for people to learn about and enjoy the natural world, and works with partners to support sustainable forestry and farming.

**KLT 331 Main Street P.O. Box 261
Winthrop, ME 04364 207-377-2848 tklt.org**

*Thank you to those who helped with this project:
Joyce Foley, Chuck Lakin, Lynn Roberts Reed,
Andrew Tolman, Dave Roque, Carol Hassell, Jean-
Luc Theriault, and Theresa Kerchner*

Connection to the Kennebec Land Trust

The Kennebec Land Trust (KLT) is considering a green cemetery initiative. Such a project would require a substantial amount of time and commitment, but if an appropriate site were found in the near future, KLT is willing to evaluate the feasibility of partnering with a private or public entity to create and manage a green cemetery. Funeral expenses from the green cemetery could be dedicated to cemetery management and future conservation projects. The burial process would still be handled by supportive funeral homes, but the service would take place soon after death, allowing the embalming process to be skipped. KLT could also easily link a green cemetery project to its ongoing Local Wood WORKS initiative. Most green caskets are made of pine, an abundant forest resource in Maine. Local woodworkers could supply locally harvested and crafted coffins, and area funeral homes could ensure that every aspect of the funeral goes smoothly. In order to develop and maintain a functioning green cemetery, KLT must first establish a partner who would be willing and able to run a cemetery. Additionally, a new, appropriately sited property must be purchased or donated along with sufficient funding to start a green cemetery. Despite potential roadblocks, it seems as though the Kennebec Land Trust is poised to add to the growing momentum of green cemeteries nationwide by creating a picturesque green burial site.



Last Things



A pine “wedge” coffin designed and created by Chuck Lakin of Waterville, Maine. Made entirely of untreated wood, this coffin will decompose completely.

Green Burial The Natural Way to Go

**By: Josh Caldwell
Kennebec Land Trust Intern
August 19, 2016**