

Basic Gravestone Restoration Workshop
Castine, Maine
By Abbie McMillen



Workshop Leader Jon Appell

On Saturday August 16, a small but interested group of 5 living souls collected in the Castine Cemetery to receive instruction on gravestone restoration from Jonathan Appell, an independent gravestone conservator from Connecticut. The workshop was organized by Brian Adams of the Wilson museum. A specific stone, belonging to Robert Perkins, was the demonstration subject. The Perkins family were early settlers of the town, wealthy and prominent in their day, but their gravestones, like most of the other stones in the "pioneer section" of the cemetery, currently need a lot of "T L C." The museum chose a broken Perkins stone because the museum's buildings, originally built by a Perkins, also are situated on land once owned by the Perkins family.

It became obvious early in the day that Mr. Appell is a true expert and a professional who loves his work. While rain poured and we huddled under a portable "sun" shelter, we listened intently as he packed a whole lot of information into a few hours. Here are some of the highlights:

The earliest stones in America were one-piece tablet stones, held up only by the ground in which they were placed. About one-third of the vertical length of the stone was set into the ground, if a stone long enough could be found. If such a stone was unavailable or too expensive, a base was used, either entirely buried in the soil or rising above it. The tablet was set into the base in a slot or "keyway" cut out for that purpose, and mortared in place using limestone mortar which often was made locally and quite inconsistent in composition. (Another early design was the table stone, laid horizontally on legs, found in places like Newport RI.)

Most stonecutting knowledge and skill, as well as the early iconography, came from England and Scotland. These early immigrants trained their apprentices, and thus the craft spread. There were itinerant carvers. Sometimes the name and date on a stone will be more crudely carved than the decoration, indicating it may have been added locally or by apprentices. Stonecarvers were also

masons. "Freemasons" were called "free" because the stone they worked with was free of heavy graining due to impurities.

Stone design relates to the popular culture of the day. Morbid "death heads" made their appearance on stones of the 1700's, but later in that century wings and other "soul effigies" were added. Even illiterate people could understand the images. In the 1800's, Egyptian and Greek Revival monuments came into vogue, as wealthy citizens were traveling and exploring the world. Urns and willow motifs took over in Victorian times. The advent of rail transportation in the mid 1800's allowed for bigger and bigger monuments, sometimes erected by the living in competition with each other. Rail also made it possible to order stones and monuments through the Sears catalog!

Boston became the Colonial stonecutting center because "they had great slate", possibly on one of the harbor islands. (Slate starts as clay and compresses to shale, then metamorphoses into slate.) Many slate stones from the 1600's are still in great shape. Connecticut had brownstone, which starts out as sand, under freshwater. Some of this material weathers exceedingly well, and carved stones from the 1600's are still in good shape. Vermont had soapstone, which is silica-based and holds up well. Vermont (Rutland area) also has marble. Marble, however, is calcite-based and subject to serious deterioration from acid rain. Vermont (Barre area) also has granite of course. Granite is clearly the most durable of the gravestones and is now used almost exclusively. Nowadays, the most desirable granites are imported, and either sent as blanks to the US from places like India, or re-cut here.

Gravestones face numerous hazards, besides acid rain and vandalism. Large foundation stones tend to settle into the ground. Gravitational stress is caused by placing a vertical tablet stone on a hillside. The stone keeps trying to move downhill and eventually starts leaning, then falling over and breaking. Cemetery maintenance such as snowplowing and mowing also cause damage. When a stone is scratched or hit, the damaged part is a lighter color. Weathering leaves "veining" on the surface, where softer material is washed away leaving streaky ridges of harder material. Water absorbed into a stone eventually moves soluble material toward the surface, creating a patina and leaving the interior of the stone more fragile. Stones especially marble tend to wick moisture upward from the soil through capillary action, which is one reason it is not a good idea to "seal" a stone above the ground. The wicked moisture has nowhere to go and may destroy the stone at ground level. Ferrous metals used for pinning a stone (or repairing broken stones) are a significant source of damage. The metal expands and contracts and the stone eventually cracks, and rust makes unsightly stains on the base. Bushes or other vegetation in contact with a stone can exacerbate moisture damage, and trees, especially softwoods, can fall and break stones or their roots can uproot stones. If a stone is lying flat and riddled with hairline cracks and appears warped, it is not a candidate for raising. If a stone is too far gone, consider supplementing (not replacing) it with another granite stone.

When deciding how and which stones to repair, Appell cautions that "your instincts are dangerous." You want to achieve a perfectly vertical, plumb stone, as this is the most stable. Start with the stones which are leaning, not with the stones already broken. This way your limited time and funds can prevent future damage first! Also, do not grab the face of a stone and

pull it upright, it might break off. If you want to test it to see if it has come loose from its base, gently push it toward one side and then the other.

Underground repairs have to be made with mortar, not epoxy. Use historic pointing mortar, which is softer than normally available mortar. Avoid "puddling", the practice of putting a blob of Portland cement in a hole and sticking the stone in it. If the base is beyond repair, make a new base of concrete with a keyway made of an appropriately sized piece of high density foam (better than wood for this purpose.)

Re-carving a faded inscription is not recommended. Neither is excessive cosmetic cleaning. Some cleaning for documentation purposes may be necessary, but note that every time you clean a stone you are eroding it somewhat, and the cleaning will not be permanent. Except for modern granite, do not pressure wash. Do not sandblast. Water and brushes are often all that is necessary. Plastic scrapers or wooden paint stirrers will clean lichen from granite. Do not use bleach (sodium hypochlorite.) If necessary, use calcium hypochlorite ("pool shock".) Wet the stone thoroughly before applying any cleaner, as this prevents the stone from absorbing as much chemical. Rinse thoroughly. "D2" biocide can be used and is not harmful to plantings. For documentation purposes, rather than cleaning, it is safer to photograph the stone in a slanting light, using a mirror if necessary to create defining shadows. Don't use shaving cream.

At this point the rain had stopped and we took a short walk around the cemetery, noting and discussing a wide variety of types of damage. We were given a carefully prepared folder with useful and interesting handouts. There is an association for gravestone studies (www.gravestonestudies.org) which has information. In addition, Mr. Appell has published many useful monographs on various aspects of gravestone preservation, as well as a supply list. He can be reached through his website, www.gravestoneconservation.com.

After lunch, we watched Mr. Appell as he carefully began the process of restoring Robert Perkins' stone, which he estimated would take almost two days. It was a most informative and enjoyable educational experience, and thanks are due to the Wilson museum and Brian Adams for making it possible.