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ABSTRACT

A forgotten late-19th-century cemetery (ca. 1854–1879) with 12 graves was discovered in early 2008 during a construction project in western Oregon. Eight graves had been previously opened during a 1901 disinterment, but four remained intact. All provided information on burial patterns during the decades following American settlement of the Willamette Valley by Oregon Trail pioneers. Although the timeline is both slightly delayed and compressed, trends in burial ornamentation and hardware generally follow those noted in American cemeteries in the East. The unadorned graves of the 1850s are most similar to those of earlier decades on the eastern seaboard. By the end of the 1870s, rail lines had been built through the Willamette Valley, and within a few years the valley was linked to a growing national rail network. A relative immediacy of bicoastal contact was achieved at this time, allowing a measure of synchronicity in funerary trends.

Introduction

Burials have long been recognized as providing unparalleled insight into social factors such as health and demography, status and economic position, social associations, and even the elusive realms of aspirations and beliefs (Bell 1990; Little et al. 1992; Grauer 1995; Winchell et al. 1995; Davidson 2004). Although a number of investigations relating to prehistoric burial practices in the Pacific Northwest have been reported (Sampson 1985; Schulting 1995; Tasa 1997), there have been relatively few investigations of historical burials. Among those is Jenkins's (1983) report on the relocation of two small pioneer family cemeteries in advance of construction of the Applegate Dam in southwest Oregon; these burials date from about the 1890s to the 1900s.

Studies of cemeteries in the eastern United States reveal a marked increase in the expense and ritual of burials during the 19th century, noted especially in the elaboration of coffin hardware. This “beautification of death” reflects an increasingly industrial economic landscape that fostered an unprecedented consumerism through the widespread availability of mass-produced low-cost goods, and during the latter 19th century, by a Victorian social ethos that encouraged social “presentation” (Coffin 1976; Farrell 1980; Bell 1990; Ames 1992; Little et al. 1992).

In comparison to the eastern seaboard, western Oregon was a remote frontier in the mid-19th century. Western migration by Americans on the Oregon Trail began in the mid-1840s, and social and economic contacts with the East did not achieve relative immediacy until rail links were established in the 1880s. This paper explores burial practices used from ca. 1854 until 1879, as observed in a pioneer family cemetery in western Oregon. The simple and unadorned earliest burials reflect the relative isolation of a remote frontier household during the initial years of the American settlement of the Willamette Valley. These contrast with the more elaborate graves of the mid- to late-1870s, which exhibit the increased availability of mass-produced funerary accoutrements, and adherence to national trends in burial practices and attitudes.

Project Background

In mid-May 2008, large-scale excavations associated with construction of a new hospital complex in Springfield, Oregon exposed a set of human remains (Grave 1). The state historic preservation office (SHPO) approved emergency recovery of the remains, which appeared to represent an isolated 19th-century burial. During recovery, the outline of a nearby infant-sized coffin (Grave 2) was exposed, and fragments of wood thought to represent a badly damaged third grave (Grave 3) were found. Systematic screening of previously disturbed fill material

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also resulted in recovery of a partial femur from a child approximately two years of age, possibly from the disturbed Grave 3.

With these findings, research into the property's history led to a successful search for potential family descendants. Consultation among descendants, hospital representatives, the SHPO, and the Oregon Commission on Historic Cemeteries resulted in a plan to explore the extent of the cemetery, and to remove identified burials for reinterment at a nearby cemetery. Ultimately, 12 graves were located, 8 of which had been previously opened and the remains removed. This is consistent with a 1901 newspaper account of a disinterment of eight graves in the area; physical traces and community memory of the cemetery were subsequently lost. For reasons that remain unknown, four burials had been missed during the earlier removal. The cemetery site was assigned number 35LA1461 by the Oregon SHPO.

Cemetery History

The cemetery was on the donation land claim of William M. and Hixey Stevens, who in 1847 crossed the plains by wagon to reach the Willamette Valley with their 10 children. By October of that year they had established their claim between the Willamette and McKenzie rivers, the first in the area that would eventually become the city of Springfield. At the time there were perhaps half a dozen other non-Native American settlers in the upper Willamette Valley. The Stevens's three eldest adult sons also established land claims near that of their parents (General Land Office 2008). The Stevens's 11th child, Mandely Carolyn, a daughter, was born in 1849. She was the only child of the family born in Oregon, and likely the first child of European descent born in Lane County.

The first cadastral survey of the area was done in 1853 by the General Land Office (GLO); the GLO map for the township records the "Road from Oregon City to the Mines" through the Stevens's land claim (Figure 1). Oregon City, a suburb of modern Portland in the northern Willamette Valley, was often considered the symbolic end of the Oregon Trail. The reference to "mines" relates to the recently discovered gold fields of California and southern Oregon, to which many early Willamette Valley

immigrants were drawn. History credits the Stevens family with establishing the first ferry on the McKenzie River north of their claim, in the area where Interstate Highway 5 now crosses. They also started the first ferry on the upper Willamette, where the main bridge between the cities of Eugene and Springfield is now located (Walling 1884; Neal 1959; Carter and Dennis 1996).

The Stevens family cemetery may have been established in 1854, when their youngest daughter died just prior to her fifth birthday (Table 1). Later that same year the second youngest, Charles Jefferson, died shortly before his 10th birthday. In 1860, William Stevens, the family patriarch, was accidentally killed by a horse, and interred in the family plot (Walling 1884). The eldest son, Harrison Andrew, was buried in 1876 (*Eugene City Guard* 1876). Hixey, the family matriarch, was possibly the last addition to the cemetery, in 1879 (*Eugene City Guard* 1879). Over a period of 25 years, the Stevens family cemetery received 12 burials; most were children whose identities remain uncertain.

Following Hixey's death in 1879, the family property was divided among heirs, and Lane County title documents confirm that the parcel with the cemetery was sold outside the family within the following decade. When the next family member died (son William H. Stevens) in 1883, he was interred in the nearby Gillespie Cemetery, a decision that may have anticipated the passing of the plot from family ownership. By the turn of the century, survivors chose to disinter family remains and remove them to Gillespie Cemetery (*Eugene Weekly Guard* 1901). This initial removal more than 100 years ago is likely the reason the existence of the family cemetery had been forgotten until its recent rediscovery.

Recovery

Grave 1 was partially disturbed in May 2008 by the large-scale track-hoe excavation that led to its discovery. Though the burial remained partially in place, much of the bone had been scattered. Due to the extent of disturbance which obscured the grave outline, a 2 × 2 m excavation unit was centered over the in situ remains and oriented with the grave alignment. All other grave excavations followed the outline



FIGURE 1. Location of the Stevens family cemetery on the 1853 General Land Office cadastral survey map (base map from <http://libweb.uoregon.edu/map/GIS/Data/Oregon/GLO/index.htm>). Map grid lines are at half-mile intervals. (Map by T. Connolly, 2008.)

TABLE 1
 KNOWN BURIAL LOCATIONS FOR STEVENS FAMILY MEMBERS

Name (Death Dates, Age)/Spouse	Burial Location
First Generation in Family Cemetery	
William M. Stevens (d. 25 May 1860, age 55)	Family plot, moved to Gillespie Cemetery in 1901
Hixey (Hiccy) V. (Jones) Stevens (d. 1 Sept. 1879, age 72)	Family plot, moved to Gillespie Cemetery in 1901
Second Generation in Family Cemetery	
Charles Jefferson (d. 20 Dec. 1854, age 9)	Family plot
Mandely Caroline (d. 5 Feb. 1854, age 5);	Family plot
Harrison Andrew Stevens (d. ca. 5 Jan. 1876, age 47)	Family plot, moved to Gillespie Cemetery in 1901
Sarah (Bogart Foley) Stevens (d. ca. 1870s) ^a	Family plot, moved to Gillespie Cemetery in 1901
Child (d. unknown)	Family plot?
Second Generation not in Family Cemetery	
Ashland Orlando Stevens (d. 1 July 1907, age 76)	Eugene Masonic Cemetery
Mary Margaret (Steward) Stevens (d. 13 Aug. 1920, age 79)	Eugene Masonic Cemetery
Alvin Burt Stevens (d. unknown)	Unknown (moved out of area)
Sarah Jane (Stevens) Armitage (d. 2 March 1913, age 79)	Gillespie Cemetery
George H. Armitage (d. 12 Feb. 1893, age 69)	Gillespie Cemetery
John W. Armitage (d. 1864, age 12) ^b	Gillespie Cemetery
Edward H. Armitage (d. 1864, age 2) ^b	Gillespie Cemetery
George Henry Armitage (d. 1864, age 4) ^b	Gillespie Cemetery
Melven Armitage (d. 1879, age 5) ^b	Gillespie Cemetery
Isaac Esdras Stevens (d. 23 Jan. 1923, age 87)	Eugene Masonic Cemetery
Careen E. (Washam) Stevens (d. 21 Oct. 1858?)	Eugene Masonic Cemetery
Elizabeth Anderson (d. 29 March 1932)	Unknown
Mary Ann Stevens (d. unknown)	Unknown (moved out of area)
S. G. Thompson (d. unknown)	Unknown (moved out of area)
James Anderson Stevens (d. 7 March 1904, age 65)	Masonic Cemetery
Emily F. (Greenwood) Stevens (d. 28 Jan. 1917, age 68)	Masonic Cemetery
Emaline Matilda Stevens (d. 6 May 1912, age 71)	Unknown, died in Eugene
William Henry Stevens (d. 11 Oct. 1883, age 40)	Gillespie Cemetery
Josephine ? (d. unknown)	Unknown

Note: All named cemeteries are located in Eugene, Oregon.

^aSarah Bogart had been married to a Mr. Foley prior to her marriage to Harrison; she had at least two children prior to her marriage to Harrison.

^bFour of Sarah and George's children died during the time the Stevens cemetery was active, but were not buried there.

of the burial pit. Sediment from the excavations was screened through 1/8 in. mesh.

Although the feasibility of using ground-penetrating radar to search for additional burials was considered, this was rejected due to the fact that the primary target area was partially excavated, with an extensively disturbed and uneven surface, factors that would have presented challenges for both data collection and interpretation. For example, shallow graves (just below recently excavated surfaces) might not be reliably distinguished from recent excavator disturbances. Exploration of the area surrounding the known graves was aided by a track hoe, using a 4 ft. bucket with a straight lip. Once a grave outline was exposed, standard hand excavation and screening of fill through 1/8 in. mesh was implemented within the identified burial pit. By this process, 9 additional graves were exposed, making a total of 12 graves (Figure 2).

All graves were oriented east–west, and for all graves for which burial position could be determined, bodies were extended in the supine position with their heads to the west. A primary north–south row of nine graves was found, with the three initially discovered graves (1–3) at the south end of the line. Grave 10, the other grave containing an intact burial, was located at the north end of the line. Average spacing between graves in this line was about 5 ft. Three graves were in a partial row west of the initial row, with two graves (5 and 6) situated approximately 8 ft. west of Grave 2, and one grave (11) approximately 10 ft. west of Grave 8.

The southernmost grave identified (Grave 3) had been largely destroyed by the mechanical excavator before the discovery of Grave 1, and prior to this discovery the area south of Grave 3 had been excavated to a greater depth than that of the burials. Thus, it is possible that additional graves had been present. This is considered unlikely, however; monitored mechanical excavation following the initial discovery extended minimally some 20 ft. west, north, and east of the known graves. For the previously excavated area to the south of the cemetery, the archaeologists screened an estimated minimum of 15 cu. yd. of stockpiled fill. Human remains recovered through this process included numerous adult elements, many of which could be directly associated with the Grave 1 individual, as well as remains from a child about two years of

age. The juvenile remains were assumed to be from the extensively damaged Grave 3. Since no other unassociated remains were identified, it is believed that no additional graves were present.

Burial depth was measured from a common datum, and then estimated from the original ground surface. Since the entire excavation area was within a partially excavated pit, depth values were necessarily estimated. Burial depth increased slightly from north (ca. 5 ft.) to south (6+ ft.), suggesting that the original ground surface may have sloped slightly from north to south.

Eight of the burials were ultimately found to have been disinterred, but information on each grave (coffin type, coffin hardware, presence of personal artifacts) was documented for all. Although only three graves had in situ burials, human bone was recovered from seven graves, and personal items (buttons, beads, pins, a ring, etc.) were also recovered from seven. All skeletal elements/fragments were transported to the University of Oregon Museum of Natural and Cultural History osteology laboratory where they were cleaned, and a detailed inventory and examination of each was conducted. In general, methodological standards outlined by Buikstra and Ubelaker (1994) were followed.

Fragments of coffin wood recovered from Grave 1 were identified as cedar. Wood from Grave 11 could only be identified as conifer, and all other wood was pine.

Grave 1 was that of an adult male, 22 to 35 years old. The vertebral column, the left ulna and radius, and a few other bones remained in situ, but most of the bone elements had been dislodged at the time of their discovery. All 24 true vertebrae were present, but the anterior portions of 12 thoracic and 5 lumbar vertebrae were missing postmortem, damage consistent with scraping by the blade of the track hoe. The skull was highly fragmented; portions of the frontal and right and left parietals were reconstructed from 16 fragments, but most of the cranium was represented by dozens of small pieces less than 2 cm in size. Fragments of the left maxilla and mandible with dentition, as well as several additional dislodged teeth, were present. Staining (probably tobacco staining) was noted on molars and premolars. There is also a small circular dental filling that measures 2 mm in diameter, made out of a yellow metal,

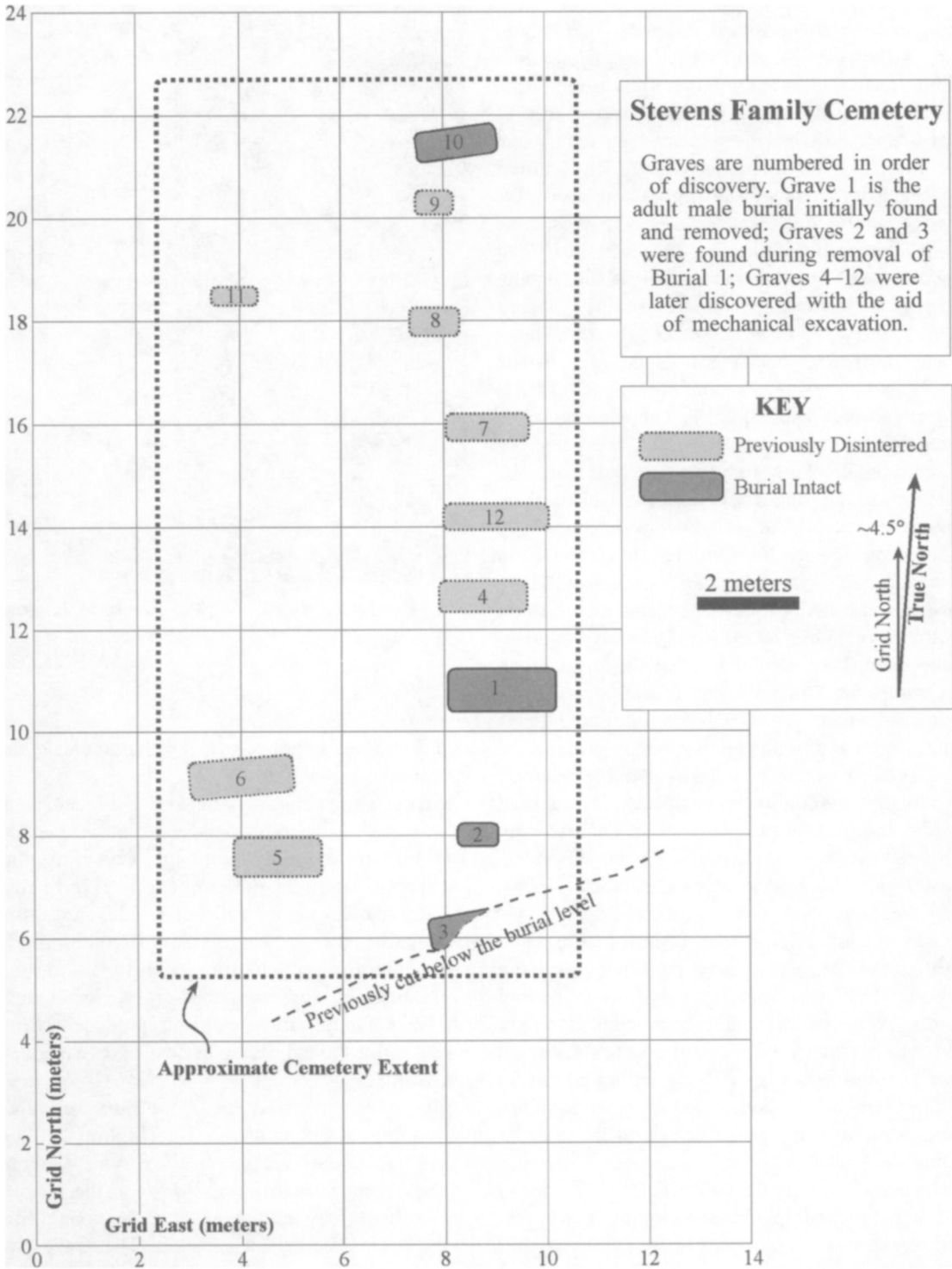


FIGURE 2. Plan of the Stevens family cemetery. (Drawing by T. Connolly, 2008.)

presumably gold, on the distal surface of the right central upper incisor (Figure 3). Glenner and Willey (1998) report that simple metallic fillings using a variety of materials (gold, lead, silver, asbestos, tin, aluminum, and mercury-based amalgam) had been placed by dentists in the eastern U.S. since the early 19th century. According to Adams (1956), gold was easily the most common filling material in the West, due to its availability following the gold rush, and to continued vigorous mining activity throughout the region at least through the 1880s. Adams's (1956) *History of Dentistry in Oregon* reproduces examples of newspaper ads from the mid- to late 1800s listing prices for gold fillings (\$1 to \$5) and tin fillings (up to \$2). Gold dentures were listed for \$100 to \$200.

Personal clothing items recovered from the burial include one four-hole Prosser button, one ferrous-metal buckle, and one ferrous-metal foundation for a cloth-covered button. Coffin wood and nails remained in place only along the head and upper-left side (northwest quadrant of the grave), but based on the remaining elements it is likely that the coffin was hexagonal. Although no adhering fabric remnants were found, the recovery of 61 5/8 in. lining tacks suggest the coffin may have been fabric lined or covered. Coffins from 18th- and 19th-century burials in London were typically upholstered inside and out, with pins often decoratively arranged (Reeve and Adams 1993). No ornamental elements (coffin screws, handles, hinges, etc.) were present.

Grave 2 held an intact infant burial. The right mandible was nearly complete, and the left mandible was missing only the ascending ramus. None of the mandibular dentition had erupted, but many of the teeth were visible in their bony crypts due to the deteriorated nature of the bones. Both dental and skeletal development indicate an age of six months plus or minus three months.

The small hexagonal coffin (2 ft. 9 in. long) had been placed inside a rectangular wooden burial vault or "outer coffin box" (Davidson 2004:397). Personal items found with Burial 2 include one copper-alloy straight pin, suggesting the body was wrapped in a cloth shroud, and several white drawn-glass beads. Coffin hardware included 49 cut nails, upholstery tacks, a single coffin screw of white and ferrous metal,



FIGURE 3. Right upper incisor with gold filling, Burial 1. (Photo by J. McLaughlin, 2008.)

and 7 1/2 in. upholstery tacks that indicate the coffin was lined.

Grave 3 was mostly removed by mechanical excavation prior to discovery of the cemetery, and due to extensive damage grave dimensions could not be determined. It is probable that at least some of the bone recovered from the nearby pile of excavated fill, including a partial femur representing a child about two years of age, was from this grave. Excavation of the remaining grave elements produced coffin nails, a four-hole Prosser button, and two green drawn-glass beads.

Grave 4 had an outer wood box or vault containing a hexagonal coffin (Figure 4). The vault had squared ends, but its sides tapered slightly from head to foot. Based on the size of the coffin (approximately 4 ft. 7 in. long), this grave may have held a subadult. The grave had been previously opened and the body removed, although two cervical vertebrae and a tooth fragment were recovered during the 2008 excavation.

Personal items included four-hole Prosser and ferrous (formerly cloth-covered) buttons; coffin hardware included cut nails, lining tacks, coffin

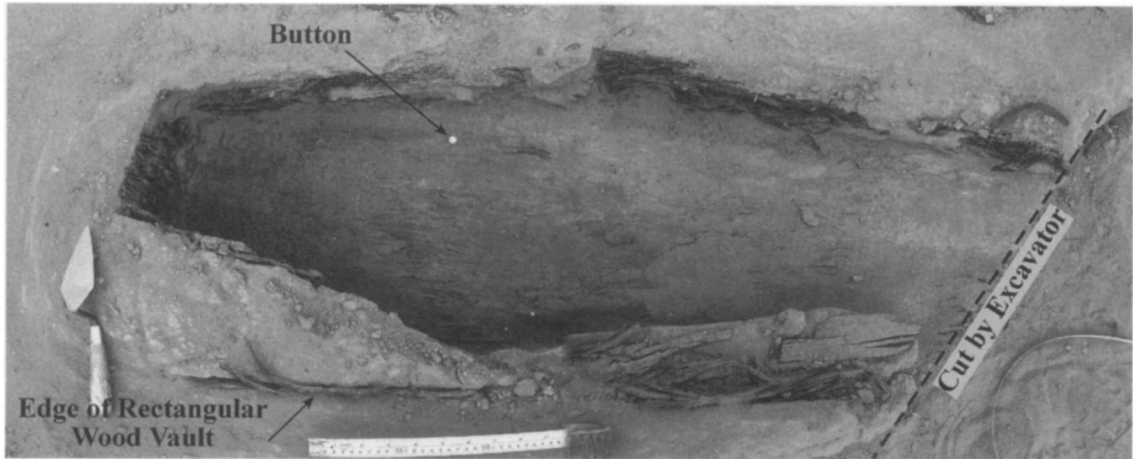


FIGURE 4. Grave 4, showing the outline of the typical hexagonal coffin, and the perimeter of the exterior grave box. The foot of the grave had been cut by the mechanical excavator. (Photo by T. Connolly, 2008.)

screws, and decorative screw caps (or “diamond tacks,” tacks with heads made to look like decorative coffin screws, but lacking the functional screw element). In addition, 66 cut nails or fragments (mostly 8d [2-1/2 in.] and 10d [3 in.]) and 27 lining tacks (1/4 in. to 1/2 in. long) were recovered.

Grave 5 had been previously opened and the remains removed; as a result of the disinterment the burial pit was very irregular, and features of the original grave had been destroyed. Although a few board fragments from the bottom of the coffin’s east end remained with in situ structural nails, these were insufficient to determine coffin type. Machine-cut nails included 10d (3 in.) and 16d (3-1/2 in.) sizes. A single white- and ferrous-metal coffin screw was recovered. No human remains or personal artifacts were recovered. Based on proximity to Grave 6, identified below as that of Harrison Stevens, Grave 5 is most likely that of his wife Sarah (Bogart/Foley) Stevens; her youngest child was born in 1873, so her death was in that year or later.

Grave 6 remains had been previously removed. During the disinterment, the original grave pit was widened to remove the body, which destroyed original grave features. As noted in 2008, the grave pit measured about 7 ft. 3 in. long. No human remains or personal items were recovered from Grave 6.

Wood fragments and cut nails were found at the east end of the grave, but most recovered

items were found along the centerline of the grave as if the coffin sides had collapsed inward when reopened. Items recovered from Grave 6 include a white- and ferrous-metal coffin screw, 33 machine-cut nails and fragments (9d [2-3/4 in.], 11d [3 in.], and 12d [3-1/4 in.] being most common), 11 lining tacks (typically 1/2 in. long), stringers of a green decorative fabric trim or braid (“rick-rack”), and a single-lug swing-bail coffin handle with Masonic symbols (Figure 5). A matching Masonic handle had been previously recovered adjacent to the grave from fill disturbed by the mechanical excavator. The backs of the handles retain fragments of two fabric layers, both relatively fine weave and probably wool. Both could have served as backing that would have prevented the scratching of the coffin during attachment; it is also possible that only the lower layer was backing for the handle, while the upper layer could be remnants of a fabric coffin covering. In their 1865 catalog, the Russell and Erwin Manufacturing Company (1980:335) carried a coffin handle identical to those recovered.

This is apparently the grave of Harrison Stevens, who died in 1876; the *Eugene City Guard* of 8 January 1876 reported that Harrison was buried “at the family burying ground by Eugene Lodge No. 11 A. F. & A. M. [Ancient Free and Accepted Masons], of which he was a member” (*Eugene City Guard* 1876). According to the lodge historian, records of the Eugene Masonic



FIGURE 5. Single-lug Masonic coffin handle (one of two) from Grave 6, that of Harrison Stevens who died in 1876. (Photo by C. Ruiz, 2008.)

Lodge confirm that Harrison was the only lodge member from the Stevens family who died during the time the cemetery was in use (Don Micken, pers. comm., 2008). Harrison is named in the 1901 *Eugene Weekly Guard* article reporting the disinterment of the Stevens family for removal to the Gillespie Cemetery (*Eugene Weekly Guard* 1901).

Grave 7 dates from the latter 1870s, and is probably that of family matriarch Hixey Stevens, who died in 1879. The coffin is the most elaborately furnished in the cemetery. This grave had been previously reopened and the remains removed; Hixey is named in the 1901 article

reporting the removal of her remains to the Gillespie Cemetery (*Eugene Weekly Guard* 1901). No personal artifacts were recovered from this grave, but several small bone fragments consistent with ribs were recovered.

The intact portion of the coffin was about 5 ft. 2 in. long, but the east end of it had been damaged by the mechanical excavator. If the coffin were symmetrical east to west, which seems likely, it would have been slightly over 6 ft. long. The coffin was octagonal, with flat head- and footboards, and three approximately equal-length panels on each side. Six coffin handles, one at each side panel, were recovered

(four were in place; two at the foot end had been displaced by the mechanical excavator). Each double-lug handle consisted of a pair of decorative sockets (lugs) attached to the coffin, between which a bar handle was set (Figure 6). The sockets are made of Britannia metal, while the bars are plated iron and highly corroded. The decorative handle sockets are stamped with a patent date of “January 6, 1874” (design patent no. 7103). This patent was issued to William Smith, an agent for the Meriden Britannia Company of West Meriden, Connecticut (U.S. Patent and Trademark Office 2008). The company made products of Britannia metal (a tin alloy), meant to approximate the appearance of pewter.

The coffin also had decorative white-metal coffin lifters or rests, found at the base of the grave (these were generally attached to the floor of an exterior coffin box, and simplified the removal of lowering straps), a white-metal knob or caplifter, an escutcheon pin, and lining tacks. Davidson (2004) indicates that coffin rests became common late in the 19th century, and their presence in Grave 7 is consistent with a relatively late burial for this cemetery. Caplifters were attached to a coffin lid, often but not always on a panel covering a viewing window. Escutcheons, secured by escutcheon pins, are decorative metal plates through which a coffin screw is mounted.

The unique coffin form and relatively elaborate decorative hardware likely reflect the availability of a greater array of funerary furnishings than was available for earlier interments.

Grave 8 remains had been previously disinterred. Fragments of coffin wood and nails (10d size) were found throughout the grave fill, but no coffin features were preserved. When first identified, the burial pit was over 6 ft. long and over 3 ft. wide, an artifact of the prior removal; at the depth of the original grave, dimensions narrowed to a child-size box of approximately 3 ft. 9 in. long by 2 ft. wide. Five bone fragments were recovered from the grave fill, but all were determined to be nonhuman (sheep), probably introduced at the time of the 1901 disinterment.

Items recovered from Burial 8 include 37 blue and 39 red-on-white polychrome beads (all are rounded glass drawn beads) and a small silver ring. The ring is child sized, about a standard size 1 (inside diameter of ca. 12 mm); an average woman’s ring size is 7 (ca. 17.3 mm inside diameter). This is consistent with the child-sized grave. The grave goods suggest a female child.

Grave 9 had been previously opened and the remains removed. This grave measured about 2 ft. 6 in. long by 1 ft. 10 in. wide, clearly that of a small child. This grave is represented only by the plank base of a burial vault; five cut nails were the only recovered artifacts. No human



FIGURE 6. Double-lug coffin handle (one of six) from Grave 7, that of Hixey Stevens who died in 1879; this handle was patented in 1874. At top are two of five coffin lifters recovered below the coffin’s baseboard. (Photo by C. Ruiz, 2008.)

remains were present, and no trace of a coffin or the upright walls of a vault were noted.

Grave 10 held the intact remains of a child, estimated to have been about four years old at the time of death. The grave pit held a rectangular wooden vault measuring 5 ft. 3 in. long; within the vault was a hexagonal coffin about 4 ft. long. At the west (head) end there appears to have been a partial vault cap over the coffin, made with a series of planks oriented perpendicular to the east–west coffin axis. Davidson (2004:425–426) notes that vault caps were usually loose planks, covering the shelf of a narrow grave cavity stepped in from a wider grave shaft. The planking covered only the cranial area.

Coffin hardware included 7 coffin screws, 192 upholstery tacks, and 125 machine-cut nails, unusually high numbers for both. Most identifiable nails were 5d (1-3/4 in.) size, but 10d (3 in.) and 12d (3-1/4 in.) nails were present. Personal items were limited to three highly corroded straight pins that may have secured a cloth shroud. They were recovered from the neck, the chest, and the lumbar/abdomen area.

Although the skeleton was complete the bones were fragile; several were treated with a binding agent (Acryloid B-72, an ethyl methacrylate copolymer) during the excavation process to aid in their intact recovery. The maxillary dentition included all four fully erupted deciduous incisors, both deciduous canines, the right and left deciduous first molars, the right and left deciduous second molars, and open bony crypts exposing the crowns of unerupted right and left permanent first molars. The mandibular dentition included all four fully erupted deciduous incisors, both deciduous canines, all four deciduous molars, partially open bony crypts with the crowns of the right and left permanent first molar visible, and barely open bony crypts with the two cusps of the right and left permanent second molars visible.

Dental age was estimated to be 4 years \pm 12 months based on the grossly observable eruption and developmental stages of the deciduous and permanent teeth. Skeletal age at death, determined by examining the presence/absence and development of bony epiphyses, and the dimensions of the complete long bone, was estimated to be an average of 3.5 years. Sex could not be determined, due to the young age.

Grave 11 had been that of a previously disinterred infant. Traces of a hexagonal coffin within a wooden vault were present. The vault measured 2 ft. 9 in., and the coffin appeared to have been nearly the same length, so would have fit snugly inside the vault. No personal artifacts were recovered. Coffin hardware included 5 white- and ferrous-metal coffin screws; 5, 1/2 in. lining tacks; and 25 machine-cut 6d nails (2 in.).

Grave 12 was that of a previously disinterred adult, with a coffin estimated to have been about 6 ft. 8 in. long. The previous disinterment had broadened the grave pit around the head area, destroying the original grave features at the west end and leaving a paddle-shaped outline. Based on the partially intact outline, the coffin was probably hexagonal. More than 30 small and unidentifiable bone fragments were recovered from this grave.

Items recovered from this burial include 1 white- and ferrous-metal coffin screw; 103 1/2 in. lining tacks; and 69 machine-cut nails. Most nails were of 9d (2-3/4 in.) size, but at least seven nail sizes were present, from 4d (1-1/2 in.) to 16d (3-1/2 in.). The single coffin screw was the only ornamental hardware; this simplicity may suggest a relatively early burial. This was probably the grave of William M. Stevens, the family patriarch, who died in 1860. It was adjacent to the likely grave of Hixey Stevens (Grave 7), and this pair was centrally positioned in the family cemetery.

Personal items from this grave include six metal foundations for cloth-covered buttons, one four-hole Prosser button, and three black-lacquered wood four-hole buttons.

More than 100 small bone fragments were recovered from disturbed areas unassociated with specific graves, primarily from a fill pile made by the track-hoe excavator in the area south of the cemetery prior to its discovery. Many of the fragments could be identified as adult human remains; a number could be matched with Grave 1 remains, and it is probable that the majority of these are from the Grave 1 individual.

In addition, two bone fragments were identified as juvenile human remains. One is a large portion of the diaphysis of a probable right femur measuring 173 mm. This measurement is consistent with a minimum of two years plus or minus seven months at the time of death. The

second small fragment was identified as a probable femoral diaphysis fragment. Both fragments were poorly preserved, and are most likely from the badly disturbed Grave 3.

Summary and Discussion

Twelve people were buried in the Stevens family pioneer cemetery between about 1854 and 1879. Ownership of the property on which the cemetery was located passed from the Stevens family in the 1880s, and it was likely this circumstance that motivated the survivors to disinter and move the family remains to the nearby Gillespie Cemetery in 1901. A contemporary newspaper account reports that the remains of eight individuals were removed at that time (*Eugene Weekly Guard* 1901). Awareness of the cemetery quickly faded after this event, and it remains unknown why four individuals were left behind and forgotten. It is possible that some grave markers had become displaced, or that the remains of nonfamily members were excluded from the family removal.

The cemetery's population profile confirms the difficult realities of life in a frontier setting. Of the 12 burials, only 5 were adults. The Grave 4 individual may have been a subadult (teen), while the other six were children under the age of 10, including two infants. Thus, 58% of the burials were children, and 50% were children under age 10. Hixey Stevens, the only one of the 12 family members to have survived to a senior age, died at 72. The other known adults died relatively young; her husband, William M. Stevens, died in a farm accident at age 55; their eldest son Harrison died of an illness at age 47; Harrison's wife, Sarah, was probably about 40 at the time of her death; and the unknown occupant of Grave 1 is estimated to have been in his 20s to early 30s.

The 1901 newspaper article on the cemetery disinterment mentions the removal of William M. and Hixey, their son Harrison, and a daughter buried in 1854 (this would be Mandely Caroline, who died just before her fifth birthday). The article also mentions "a daughter with her three children" (*Eugene Weekly Guard* 1901). Since there are no other daughters of William and Hixey who died during this period, this is probably a term of endearment used for daughter-in-law Sarah (Bogart Foley), Harrison's

wife. This assumption is supported by Gillespie Cemetery records, which indicate that "Harrison Stevens, wife and child" were among those removed from the family cemetery in 1901 (Jan Gillespie, pers. comm., June 2009). The identities of the other moved children remain unknown, but the wording of the 1901 article suggests they could have included children of Sarah from a previous marriage.

Although the child mortality reflected in the Stevens cemetery is somewhat higher than comparable figures from proximate sources, the high child-mortality rate is largely consistent with other data from frontier Oregon. In the nearby Eugene Masonic Cemetery, established in 1859, 36% of all burials during its first two decades of use (the 1860s and 1870s) were children under the age of 10 years. Throughout Oregon, children under 10 years accounted for 41% of all the deaths during the 1880s. This is probably partly a function of the state of frontier health care, as well as a reflection of the generally youthful immigrant settler population. By the turn of the century, only 22% of all deaths were attributable to children under 10 (Holbo 1999).

Except for Grave 7, coffins for which the shape could be determined were simple hexagonal boxes (Figure 7). When present, ornamental hardware was generally limited to white-metal coffin screws or screw caps, which were found in seven graves. Children's graves included a rectangular wooden burial box into which the coffin was placed. Coffin wood from Grave 1 appears to have been cedar, but all other identified wood was pine. Machine-cut nails were recovered from all graves. Lining (upholstery) tacks were absent from Graves 3, 5, 8, and 9, possibly indicating that these were relatively early; it is also possible that prior disturbance is a factor in their absence.

Personal items were relatively uncommon, and none of the personal items are sufficiently time sensitive within the cemetery's short use life (ca. 25 years, 1854–1879) to permit an assessment of individuals' relative ages. Buttons were recovered from Graves 1, 3, 4, and 12. Their distribution did not reflect any strong patterns with respect to age and sex (Graves 1 and 12 were those of adult men, Grave 3 was probably that of a young child, and Grave 4 was probably that of a subadult), although the cloth-covered ferrous buttons were recovered

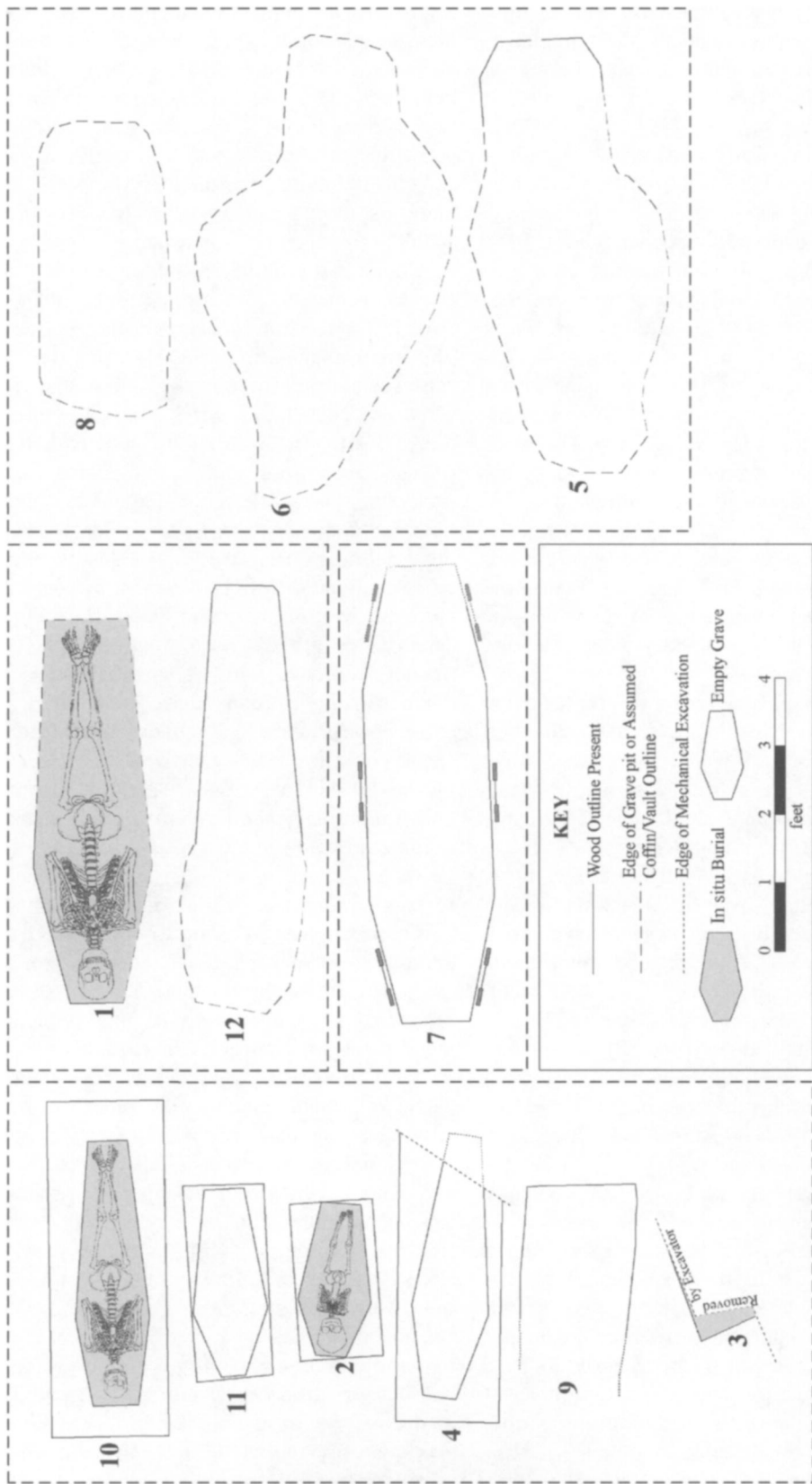


FIGURE 7. Graves grouped by burial mode: *left*, child and infant burials in plain hexagonal coffins placed inside a rectangular wood burial box; *center top*, adult graves in hexagonal coffins, no outer burial box noted (Grave 12 partially disrupted by the 1901 disinterment); *center bottom*, highly ornamented octagonal coffin with six handles; and *right*, previously reopened graves with little intact evidence. (Drawing by T. Connolly, 2008.)

from the graves of two adult men. Straight pins were found in two graves, that of an infant (Grave 2) and that of a child approximately four years old (Grave 10). No clothing fasteners were found in either grave, suggesting that both of these children's bodies had been wrapped in a cloth shroud secured with pins, rather than having been fully dressed. Due to advanced corrosion the configuration of pin heads could not be discerned. Glass beads were recovered from three child or infant graves (2, 3, and 8). Grave 8, probably that of a child, also produced the small silver ring.

The gold dental filling from Burial 1 raises questions about the practice of dentistry in pioneer Oregon. According to Adams (1956), gold was easily the most common filling material in the West; gold mining continued to be an important economic pursuit for decades following gold's discovery in both California (1848) and Oregon (1851). Adams also notes that while the first professional dentist arrived in Oregon in 1846, most early dentistry was conducted by other medical men or blacksmiths. No Oregon towns were large enough to support a fulltime dentist in the 1850s; one Portland dentist, Dr. Cardwell, describes taking three months in 1854 to service the budding western Oregon towns of Corvallis, Eugene, and Roseburg, working out of the courthouses in each community. The Oregon Dental Society was founded in 1873, but it was not until 1887 that the Oregon State Board of Dental Examiners established regulations for the practice of dentistry, including requirements that applicants pass written and oral exams (Adams 1956).

Coffin hardware may be the best guide to determining age relationships among the graves. Coffin screws were in common use by the 1850s in the United States (Davidson 2004), but their availability may have been more limited under frontier conditions in the Oregon Territory. Davidson (2004:423) suggests that screw caps (diamond caps and presumably diamond tacks) were used for a relatively short time, from the early 1860s to ca. 1880, limiting their availability to the latter half of the Stevens cemetery use life. Swing-bail handles on furniture date from the 1700s, but are not common funerary accoutrements until about the 1870s.

This timing approximately coincides with the nationwide expansion of the commercial funeral

industry. The first funeral-home business was incorporated in the Eugene area in 1883, after use of the Stevens cemetery was discontinued, but the ready availability of commercial funerary products (as opposed to those made by local craftsmen), including coffins and accoutrements such as handles, coffin rests, and caplifters, likely preceded this date by several years in the Willamette Valley. This incorporation marked the formation of a partnership agreement between a cabinetmaker and a medical doctor, according to Wayne Musgrove of Musgrove Family Mortuary, Eugene, Oregon (Wayne Musgrove 2008, pers. comm.); a development that likely reflects the increasing national trend toward the practice of embalming as part of the American funeral ritual. Embalming gained popularity during the American Civil War, because of the desire to transport the remains of loved ones home, and the practice gained general acceptance throughout American society in the following decades.

Except for minor observations regarding the dental health of the individual in Grave 1, no lesions associated with trauma or disease were noted on any of the recovered remains. The Grave 1 adult male had a gold filling; the 19th century saw experimentation with various metals for dental work, but by the time of the Civil War gold had become a common standard, and its presence in frontier Oregon, possibly in the 1860s, is consistent with this national trend (Glennier and Willey 1998).

Table 2 presents a seriation of the graves based on the occurrence of potentially time-diagnostic elements. It should be cautioned that the absence of diagnostic elements in some graves may be due in part to disturbance from mechanical excavation in May 2008, or the initial disinterment in 1901. The graves sort into three clear sets by decade nonetheless.

Graves 3, 8, and 9 may be the earliest, due to the absence of ornamental hardware, coffin screws, and lining tacks. All three are probably children's graves, and may include those of the initial 1854 interments. Graves 1, 2, 5, 10, 11, and 12 all have coffin screws and lining tacks, but no more-elaborate ornamental hardware such as handles. In terms of age, these probably represent a middle set, centered on the decade of the 1860s. Graves 4, 6, and 7 are probably the latest, due to the presence of commercial ornamental coffin hardware. All three of these

TABLE 2
SERIATION ORDER OF GRAVES, BASED ON THE OCCURRENCE OF COFFIN HARDWARE

Description	Grave Number											
	9	3	8	1	2	11	10	12	5	4	6	7
Coffin screw				?	1	5	7	1	1		1	
Lining tack				61	7	5	192	103		27	11	2
Screw/diamond cap										2		
Diamond tack										2		
Single-lug handle											2	
Two-lug handle												6
Cap lifter												1
Coffin feet												5
Escutcheon pin												1
Known or possible grave occupant	Child Charles?	Child 2 yr.?	Child Mandely?	Adult male	Infant 6 mo.	Infant Child	Child 4 yr.	Adult William?	Adult Sarah?	Teen?	Adult Harrison	Adult Hixey
Burial date	1854?		1854?					1860?	1870s?	1870s?	1876	1879

Note: Possible grave occupant and date of death is also shown.

probably date from the 1870s. Grave 6 is Harrison's (1876) and 7 is probably Hixey's (1879), likely the cemetery's last two interments.

Based on their analysis of a mid- to late-19th-century family cemetery in Virginia, Little et al. (1992) note that graves in their sample from before ca. 1850 show little evidence of ornamentation. During the early 19th century, coffins were typically supplied by a local furniture maker or carpenter. Several early burials in the study contained small tacks, suggesting a coffin lining, but generally, fabric lining was rare prior to this time (Farrell 1980). The rare occurrence of clothing fasteners suggested that shrouds were used, even in the absence of pins (Little et al. 1992). Ornamental coffin hardware (handles, caplifters, white-metal coffin screws and tacks, etc.) is typically present in graves from the 1850s and 1860s. Although coffin production was generally carried through from earlier times, inexpensive decorative coffin hardware was increasingly available through familiar hardware suppliers.

These trends can be tracked in the Stevens cemetery, albeit on a timeline that is both slightly delayed and compressed. Due to the

remote frontier setting of the Oregon Territory in the 1850s, the unadorned graves from this decade are most similar to those of earlier decades on the eastern seaboard. During the 1860s, elaboration in the Oregon burials was limited to lining tacks and coffin screws, an assemblage of ornamental gear that is much narrower in scope than is seen in contemporary eastern graves.

Little et al. (1992:409) note that during the 1870s the frequency of decorative elements increases substantially in their sample, but "the variety of types is similar to that of the 1850s." They also note the presence of decorative lining fringe in several burials from this time. In the Oregon graves, the full range of coffin hardware noted in the eastern graves during the 1850s and 1860s (handles, caplifters, white-metal coffin screws and tacks, etc.) finally appears in the 1870s.

From the 1880s to about the turn of the century, the eastern graves lacked some of the more common decorative elements of earlier decades, and instead feature elaborate handles, decorative disks and thumbscrews, and other hardware, often on commercially manufactured coffins

and caskets. The last interment in the Stevens cemetery, in 1879, with its relatively elaborate hardware on a new coffin form, may represent a commercial product rather than that of a local craftsman. Even though the decade of the 1880s is not represented in the Stevens cemetery, it is likely that the availability of grave hardware and the general course of burial practices in Oregon achieved a degree of synchronicity with those of the East at this time. By 1872, the first rail line south from Portland through the Willamette Valley to Roseburg was completed, and by the early 1880s the local line was connected easterly to the Northern Pacific's national railroad network (Horner 1919).

Many researchers have noted that there was a marked increase in the expense and ritual associated with death in America during the latter 19th century, a phenomenon described by some researchers as the "beautification of death" (Coffin 1976; Farrell 1980; Bell 1990; Little et al. 1992). This accompanied a societal shift in industrialization that fostered an unprecedented consumerism, brought about by the increasing availability of mass-produced goods, and a Victorian ethos that encouraged social "presentation" (Ames 1992). This is reflected in the accelerated development of the commercial mortuary industry in the United States, especially after about the 1860s, due to a confluence of factors, including the widespread acceptance of embalming following the Civil War, the mass production of funerary hardware that made it increasingly accessible to people of even modest means, and the increasing ease of distribution on a national scale.

A full consideration of the role of Masonry in the American settlement of the Far West, including western Oregon, is beyond the scope of this study, but the presence of Masonic symbology in the grave of Harrison Stevens is noteworthy. It is well known that many important leaders in the era of the American Revolution were Masons, and it has been argued that Masonry played a role in shaping the new nation's ideals of liberty, self-determination, and responsible social behavior (Bullock 1998). The origins of the order are imprecise, but derive at least partially from the guilds of skilled stone masons who built Europe's impressive cathedrals and castles. Respect for the knowledge of geometry, arithmetic, and engineering required to erect those monuments is reflected in the order's symbols (such as the

square and compass), and these sentiments had traction with Americans seeking to build a nation, and "civilize" the western "wilderness."

Mackintosh and Forsberg (2009) argue that the "performative geography" of ritual in the 19th-century Masonic lodge supported the ideals of the Victorian middle class, consistent with beautification of death sentiments (Ames 1992; Bushman 1992), and promoted a Masonic social morality. These values may have reinforced the 19th-century ideal of manifest destiny which promoted the concept of the inevitability of American settlement of the West. That Masons were strongly represented in vigilante movements in the West also reflects the ideal of establishing social order (Brown 1975).

The spread of Freemasonry in the frontier West may have been facilitated by an ideology compatible with westward expansion; it was also symbolic of the institutions pioneers knew from the East, and which they hoped to recreate (along with churches, schools, and commercial enterprises) in the frontier West. The first Masonic lodge in the Oregon Territory (Multnomah No. 1) was established in Oregon City in 1851. In the six years following, more than a dozen charter lodges were established throughout the territory, including Willamette Valley lodges in Salem (1852), Tuality (1853), Eugene (1856), and Corvallis (1857) (Beatty 1857). In 1859, the Eugene lodge developed plans for a new community cemetery, the Eugene Masonic Cemetery, after the fashion of the rural cemetery movement, which emphasized natural landscapes, large pathways for walking, and central open spaces for gatherings (Holbo 1999). This movement, inspired by romantic perceptions of nature derived from Europe and the America's eastern seaboard, was also symbolic of the nationalistic movement to impose order on the western wilderness.

The Stevens family was among the earliest European American pioneer families to settle in the upper Willamette Valley. Their family cemetery makes a small contribution to the growing body of archaeological work on the study of mortuary practices and demographic history of mid-19th-century America, by providing a rare glimpse into burial practices in the far Northwest when the Willamette Valley was still a remote frontier. Use of the cemetery was discontinued in 1879, within a few years of the Willamette Valley being linked by rail to a grow-

ing national network. This development marks a time when a relative immediacy of bicoastal contact was achieved, and the timing of funerary trends achieved a degree of national east/west synchrony.

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