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History and Memory at Duffy's Cut

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Mile 59 of the Philadelphia & Columbia Railroad, located in Chester County, some 20 miles west of Philadelphia, came to be known as Duffy's Cut by later generations of railroaders. It was named after the Irish immigrant contractor, Philip Duffy, who built it in 1832-33. In 1832, it was the location of one of the largest groups of victims of a devastating cholera epidemic sweeping the country, where 57 Irish immigrant laborers died, at least seven of whom were murdered. The deaths occurred among a population fearful of contagion and of what historian Alan Kraut has called "the immigrant menace." An archaeological excavation at the site from 2004 to 2012 located seven graves and a substantial number of artifacts relating to the work crew.

The Philadelphia & Columbia R.R. and Philip Duffy

In the 1820s, the race to open up the region acquired in the Louisiana Purchase began with a wave of internal improvements in the Mid-Atlantic states. The Erie Canal in New York, and the Chesapeake & Ohio Canal and Baltimore & Ohio Railroad in Maryland led the way. The Pennsylvania Legislature created the Canal Commission in 1825 to oversee several canal and railroad projects called the Main Line of Public Works, intended to link Philadelphia and Pittsburgh.¹

Railroad surveys were undertaken in 1827 and 1828 by Major John Wilson and his son, William Hasell Wilson, to locate the best possible routes through the Commonwealth for rail lines.² The Commonwealth approved two rail lines in 1828, one running from Philadelphia to Columbia on the Susquehanna, the 82-mile P&C, and the other running through the central mountains of Pennsylvania for 36 miles with 10 inclined planes between Hollidaysburg to Johnstown, the Allegheny Portage Railroad. Canals were

engineered with locks and aqueducts to link Columbia to Hollidaysburg (a distance of 172 miles), and from Johnstown to Pittsburgh (104 miles).³

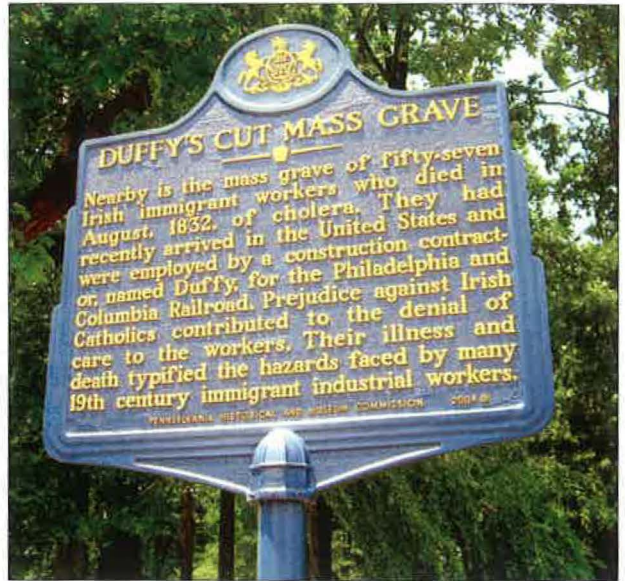
The legislature appropriated \$2 million to fund the construction of the rail lines. When it was completed, the Main Line of Public Works was expected to shorten travel time between Philadelphia and Pittsburgh (a distance of 400 miles) from three to four weeks to three to four days. According to Pennsylvania Railroad executive and historian Joseph F. Tripician, "When 'The Main Line of Public Works' was completed in its entirety in the summer of 1834 a westbound passenger would board a railroad car at Broad and Vine Sts. at 8:00 AM, and he would be delivered in Pittsburgh on the afternoon of the fourth day."⁴

Construction on the P&C started in 1829, and was projected to be completed in 1832. It was not completed, however, until 1834, at least in part because of the death of the Irish crew at Mile 59 and the need to hire a new crew to finish the job.⁵ P&C contracts were issued separately for each mile, with the average mile costing several thousand dollars and necessitating grubbing and removal of earth, and in some cases, the creation of a fill. While the problem of motive power was not yet resolved (debate raged over horses vs. expensive steam engines), the tracks were affixed to the ground by means of 300-pound stone blocks called sleepers or sills.⁶

As both American railroad technology and labor practices in the early years tended to rely on British precedents, Irish immigrant laborers were commonly used to construct the earliest rail lines and canals in both the United Kingdom and the U.S. The Irish immigrant laboring population in the U.S. became increasingly Catholic in the 1830s, having been primarily Presbyterian Ulster Scots-Irish during the 18th century.⁷ Some early railroad contractors were

also Irish Catholic, such as Philip Duffy. The presence of these Catholic contractors was important in recruiting and supervising the wave of new Catholic laborers employed on the work on expanding rail lines like P&C.

Philip Duffy was born in Ireland in 1783, and immigrated to the U.S. in 1798, the year of the United Irishmen revolt in Ireland under Theobald Wolfe Tone. Over the course of his career, Duffy held contracts with the P&C, the West Chester Railroad, and the Reading Railroad. He was a successful contractor, and died a wealthy man at age 88 in his home in William Street in the Port Richmond section of Philadelphia. In 1870, the year before he died, Duffy reported a net worth of \$40,000 in real estate and \$5,000 in cash.⁸ His Philadelphia & Columbia career spanned two decades, and included contracts for Miles 16 (1829), 60 (1829), 59 (1831), 46 (1833), 29 (1833), and the Belmont Plane (1849).⁹ His last contract was to eliminate the Belmont Plane (then referred to as Section Number 2), and this work, 1849-1850, made possible the near Main Line of Philadelphia suburban stations at Overbrook, Merion, Narberth, Wynnewood, and Ardmore. His West Chester Railroad contract was for Mile 9 into Intersection (today Malvern) in 1831, and his Reading contracts spanned the 1850s.¹⁰ He was buried at St. Anne's Catholic Cemetery, near the intersection of Memphis and Lehigh in Port Richmond.



The state historical marker installed at Duffy's Cut in 2004.
William E. Watson

(l-r) Earl Schandelmeier, Frank Watson, Bill Watson, Irish Ambassador Michael Collins, and Marie Collins (the ambassador's wife) view artifacts from the Duffy's Cut excavation during a fundraising event in February 2011.

William E. Watson Collection





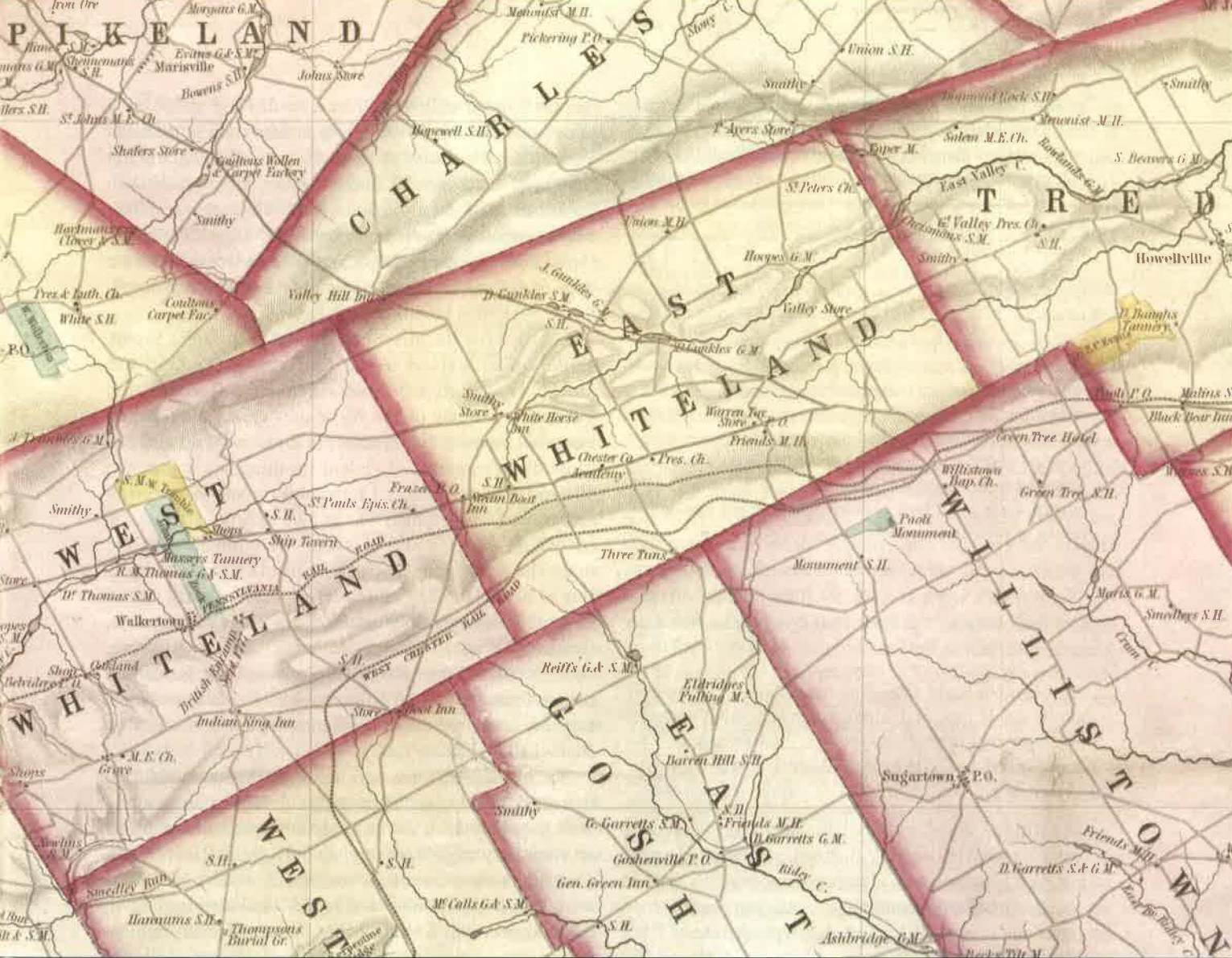
Philip Duffy signed the contract for Mile 60 on February 25, 1829, on behalf of James Smith and Co. Duffy was reported to be working on P&C Mile 60 in the June 9, 1829, *American Republican* (published in Chester County). The article notes his employment of Irish immigrant laborers and emerging problems between the workers and the local population. The miles of the P&C were enumerated eastward from the town of Columbia on the Susquehanna River toward Philadelphia, so Mile 60 was just east of Mile 59, and the landscape later named after him. The article includes a discussion of the difficult nature of the terrain, and continues:

Mr. Philip Duffy is prosecuting his Herculean task with a sturdy looking band of the sons of Erin ...

When the item of damages is taken into consideration, it is perhaps a fortunate circumstance, that where the greatest amount of ground is to be broken, it is either woodland

or thin soil, of comparatively small value. We are sorry to learn, that upon some sections, too little attention has been paid to the rights and property of farmers, through whose land the rail road passes. It is complained that fences are too often left prostrate, to the destruction of valuable crops of grain, grasses, &c. It is a matter of the first importance to preserve a good understanding between the people living adjacent to the route, and the hands employed in the work. The disregard of this has been the fruitful source of disorders and riots in some parts of the country.¹¹

Fortunately for Duffy and the P&C, no “disorders and riots” occurred during the work at Mile 60. In 1831, Duffy worked at both Mile 9 of the West Chester RR and Mile 59 of the P&C. Mile 9 was the final mile of the West Chester line into Intersection, and it did not present any particular difficulty, so it was not a reach for Duffy to take on the P&C contract for Mile 59 in the same year. Duffy appears in the 1830 Census as renting a house in Willistown, Pa., in a listing in which 20 men between age 20 and age 30 were



Detail of an 1847 map of Chester County, Pa., subdivided into townships and showing the portion of the Pennsylvania Railroad (originally the Philadelphia & Columbia Railroad) traversing the area of Duffy's Cut, west of Paoli, and the relative positions of the P&C and West Chester Railroad routes. Library of Congress

residing with him (likely fellow Irish laborers), 10 of whom were “Aliens, foreigners, non-naturalized.”¹²

Summer 1832: Work, Cholera, and Death at Mile 59

Duffy signed the contract for Mile 59 on May 18, 1831. It was supposed to be completed on April 1, 1832. The main engineering problem on Mile 59 was that a valley was located just east of the Sugartown Curve between Paoli and Frazer that needed to be bridged by a fill. A comparison can be made of the costs for Mile 59 and Mile 60, both contracts held by Duffy. The Mile 59 contract includes \$300 for “grubbing and cleaning the whole section” (compared to nothing for such work at Mile 60). Costs of removal per cubic yard at Mile 59 include: Eight cents for “sand, earth, clay, loam, gravel or loose stones” (same for Mile 60); 14 cents for “cemented gravel, or hard pan” (10 cents

for Mile 60); 10 cents for “embankment” (nine cents for Mile 60); 25 cents for “detached rock, measuring more than one cubic foot, and for slate rock” (Mile 60 distinguished between hard slate rock, 20 cents, and soft slate rock, 17); 50 cents for “solid or blast rock” (40 cents for Mile 60, and Mile 60 also included “stratified lime stone” at 30 cents); 50 cents for “all necessary cross drains, (to be built of dry flag stone),” the same amount for Mile 60.¹³

A report in 1889 by local historian Julian F. Sachse, “The Last Relic of the Pennsylvania Railroad Originally Called the Philadelphia and Columbia Railway,” includes a notice about the final cost of both Mile 59 and Mile 60:

When the road was first projected and built, the fifty ninth and sixtieth mile from Columbia, at present the stretch between Malvern and Frazer, presented greater engineering difficulties than almost any other section west of the Buck

tavern "Bryn Mawr." It was here where the state enterprise crested the south valley hill and came out at Chester Valley on the southern slope of the south valley hill. The fifty ninth mile especially was troublesome and cost more to construct than any other section of the whole line. The Chief Engineer estimate of December 21st, 1888 in reference to the two miles in question states: Mile fifty nine. This section is perched on a very rough hill side passing four ravines with two truss and two balustrade bridges, and is near the center of the fourth soil micaceous slate \$32411.42 mile. Sixty commences in a ravine where the line leaves the valley and passes over very rough ground, piercing in its course two ridges twenty four and twenty feet in depth; soil micaceous slate, affording good materials for the horse paths \$6519.91. ... when the road was first projected and built the rails were of wood plated with flat iron bars or tire irons expressly imported from England. These cars, both passenger and burden, were small four wheeled affairs drawn by single horses or two driven tandem.¹⁴

The difficult work at Mile 59 (like at Mile 60) was undertaken largely by Irish immigrant laborers who, according to Sachse,

... had but lately arrived on these shores. They were mostly single men, and without friends in this Country; they lived in a large shanty built on the west side of the ravine, which here divides the hillside.¹⁵

The 10 alien, non-naturalized, Irishmen who were living in Duffy's rented house in Willistown, and worked on the Mile 9 West Chester Railroad contract, undoubtedly worked on the P&C Mile 59 contract as well, but were joined by other newly arrived Irishmen. A typical mile of P&C construction would have required between 100 and 120 men. In 1832, the most likely ship carrying Irish laborers to Philadelphia to work on the P&C was the *John Stamp*, under Captain John Young, which sailed from Londonderry (Catholic Derry) in April, and arrived in Philadelphia on June 23.¹⁶ In fact, the *John Stamp* was the only ship arriving in Philadelphia between January and October 1832 with a substantial number of passengers listed as common laborers. The passenger list for the ship has survived, and it carried 160 men and women, 43 of whom reported themselves as "labourers," two were farmers, and two others had similar manual labor sources of employment. Twenty-one of the laborers on the ship were from Donegal, 14 were from Tyrone, and nine were from Derry (very specifically not listed as Londonderry). The average age of the laborers was 22. The ship made a stop at the Lazaretto in Tinicum, Delaware County, before landing in Philadelphia. Any ill passengers were taken off the ship at the Lazaretto before disembarking the Irish immigrants in Philadelphia.

Duffy undoubtedly picked the bulk of the laborers for Mile 59 on the Philadelphia docks and brought them to

the work site shortly after their arrival. They would have joined the men who were living in the rental property in Willistown. The heavy work at the cut and fill would not have been too dissimilar from the heavy work undertaken by some of the immigrants in ditch-digging, fence construction, or horse teaming back in Donegal, Tyrone, or Derry, but the difference now was that the workers had the hope of making money for their labor, not working simply for an exploitive landlord, as in Ireland.

Shortly after the time of the arrival of the *John Stamp*, cholera also arrived in the Philadelphia region, but probably not by ship.¹⁷ Cholera is caused by the ingestion by drinking water of the bacterium *vibrio cholera*, an intestinal parasite that attacks the digestive tract and can cause death by means of violent vomiting and diarrhea in 40 to 60 percent of cases. Cholera historically has been an epidemic disease, which was known to originate in Asia, but whose etiology and treatment were unknown at the time. The global pandemic of the early 1830s started in the Bay of Bengal in 1829, and over the next two years, spread in a northwesterly direction through Turkestan, Russia, Germany, France, and the United Kingdom. In spring, 1832, it crossed the Atlantic on ships carrying goods and people from the United Kingdom into Canada, and from Canada, it entered the mid-Atlantic region of the U.S. in June via the Hudson Valley.

The first cholera cases were reported in Philadelphia in the first week of July, but temporarily subsided coincidentally with measures such as cleaning out night soil by means of stationary engines pumping Schuylkill River water. Contemporary science believed that the causes of cholera were vapors or miasmas, and "cures" included laudanum, calomel, wearing linen, closing out drafts from houses, quarantines of certain foods (usually vegetables and fruits) and human beings. It returned with a vengeance in early August, with 176 cases reported on August 6 in Philadelphia and outlying regions (Kensington, Moyamensing, Northern Liberties), and 73 deaths on August 7.¹⁸ In all, between 900 and 1,000 people died in the Philadelphia region, with some 10,000 reportedly dying throughout the U.S., and 150,000 reportedly dying worldwide, although the number of deaths might be significantly higher.

Sachse, writing in 1889, mentioned the late summer time frame:

In the month of August the much dreaded cholera suddenly made its appearance among the laborers, many were stricken causing great consternation, and with improper attention and with the improper attention and the lack of proper remedies, the scourge could not but rage with terrible effect.¹⁹

Cholera seems to have made its appearance in Chester County in mid-August, and the first reference in newspapers of its presence among the railroad work crews was on

September 6, 1832, in the *National Gazette and Literary Register* of Philadelphia, referring to the period from August 17 to August 26, when 11 cases and nine deaths occurred.²⁰ The *National Gazette* stated that cholera “appeared in a very malignant form” at Kunkle’s Mills and the Great Valley, and several specific victim’s names were mentioned: Davis, Speer, Miles, Hall, and Ogden. Regarding the Speer family, the paper moralized:

“All were intemperate, and ALL ARE DEAD! The house, or rather hovel, in which they lived, with all its contents, was burnt immediately after the bodies were buried.”

On the other hand, regarding George Hall, the paper stated:

“He was, we believe, a respectable citizen.” William Ogden “was at the appraisal of sundry cows, pigs, &c, of Speer’s, and was attacked shortly afterwards.”

Ogden was a lieutenant in the local militia, and his family was well-placed in Chester County. One of his daughters wrote a diary that discussed the epidemic and mentioned the railroad workers in particular. The diary was known to exist in 1909, as it was discussed in an important Pennsylvania Railroad file on Duffy’s Cut, but it subsequently disappeared.²¹

Regarding the railroad crew, the *National Gazette* stated: “It is reported that several cases have occurred lower down the Valley, among the labourers on the Pennsylvania rail road. Mr. Mitchell, the general superintendent of the rail road, is about establishing Cholera Hospitals along the line of the road. The charge of Hospital No. 2 is committed to Dr. J.M. Pugh.”²² This notice is interesting because it states that William Mitchell, the superintendent of the Eastern Division of the P&C, knew about the cholera outbreak among the railroad workers. The Commonwealth disbursed \$1,030 afterwards supposedly to pay for the hospitals. There is no other reference to these hospitals in other sources, however.²³

Sachse stated that when cholera broke out in the workers’ camp, many men tried to flee to the local community, but “so great was the fear of the surrounding population, that every house was closed against fugitives, no one was found willing to give them food or shelter.” Then, according to Sachse, “fear changed into panic.”²⁴

The incubation period for cholera varied from a few hours to a few days. There were no known remedies for it in 1832, and the measures taken by healthcare providers at the time, based as they were, on the limited scientific knowledge of the time, could only be palliative in nature. Sachse did not refer to the hospitals in his 1889 article on the event, but he did mention the importance of the blacksmith employed at Mile 59 and four Sisters of Charity

from Philadelphia in the care of the men at Duffy’s Cut. Sachse wrote that the blacksmith, whom he described as a local man, “blew the dinner horn for assistance,” and some from the community came forward to help him bury the Irishmen decently. It was up to the blacksmith, not a physician, to make the determination of death and to bury the men as they died.

It is not known precisely who called for the Sisters at Duffy’s Cut, but Sachse stated that “the church authorities” in Philadelphia made the decision to send them. There were some 14 Sisters from Emmitsburg, Md., working at the cholera hospitals in Philadelphia, called upon by the city officials, when the nursing profession in many locations broke down during the height of the epidemic. The Sisters brought “large parcels of supplies and medicines,” but the carriage driver would come no closer to the site than the Green Tree Tavern, about a half mile east of the valley, and so they carried the supplies into the work site. Sachse stated that the Sisters remained on the scene until the last man had died.²⁵

Railroad tradition continued through the 20th century to maintain that 57 men died at Duffy’s Cut.

However, the November 7, 1832, *Village Record* stated that a total of only 10 deaths occurred, eight of whom were workers in the valley. The editors clarified that:

As faithful chroniclers, and to prevent exaggeration, we deem it proper to state, that upon the Railway, in East-Whiteland township, a fortnight ago, several cases of Cholera occurred, eight of which proved fatal – it then ceased suddenly as it commenced. One man, from there, moved up to the Valley Creek, near the line of East Bradford and East Caln, where he died. One other person also died immediately afterwards.²⁶

The article discussed the role of the blacksmith: “A humane man, a Smith by trade, remained as nurse, while all the other workmen fled. Having shaved and decently laid out the second man who died, he blew his horn and called in some neighbors who aided to bury him.” Finally, the editors noted Duffy’s role after the men had died: “The contractor, after a day or two set fire to the shantees and burnt them down. The disease extended no farther; the humane Smith is hearty.”²⁷

These statements are interesting in that they are a reaction to a previous, purportedly incorrect article that presumably discussed many more casualties, and which apparently has not survived in any edition in any archive. The statements are clearly out of line with what William Mitchell wrote of the event in a letter to the Canal Commission President James Clarke in the spring of 1833. Mitchell was writing about financial difficulties that Duffy had informed him of, and of his request for “part of his retained percentage,” but included the following insight about the deaths of the Irishmen at Duffy’s Cut:

“This man has been rather unfortunate during the last fall, nearly one half of his men died of cholera, but it must also be admitted that he is perfect master of the art of complaining, with or without cause.”²⁸

This is significant, in that half of a work crew on a P&C mile would not have been eight men, the number of victims stated by the supposed *Village Record* correction of November 7, 1832. Considering the full complement of workers on a mile would have been 100 to 120 men, the number of 57 casualties would not be out of line if considered to be half of Duffy’s men along the entire mile. Also, later generations of railroaders believed that 57 men had died at the Cut in 1832, not eight men.

It certainly would have been in the best interest of the railroad to have maintained externally that eight men died, so that the reputation of the railroad would not suffer, and new Irish work crews could be recruited without fear of a similar occurrence. The many advertisements in the *Village Record* for the P&C indicate that the railroad was conscious of its public image. However, it would have been just as beneficial for the railroad to have maintained internally that eight men rather than 57 had died.

What is striking about the numbers at Duffy’s Cut, is that the narrative is out of the norm in comparison with the many other instances of cholera reporting during the 1832 epidemic, wherein daily and weekly numbers of cases and numbers of deaths are routinely reported in newspapers regardless of high or how low they were. In the case of Duffy’s Cut, there appears to have been obfuscation and loss of documents (including the earlier *Village Record* article and the Ogden diary). What is suggested by the survival of the November 7, 1832 *Village Record*, but not of the story it purports to correct, is that there was possibly an early deliberate cover-up of the story of the men at Duffy’s Cut.

While Sachse did not mention the number of Irishmen who died at Duffy’s Cut in his 1889 account, future Pennsylvania Railroad President Martin W. Clement did, in his 1909 PRR file on the event. Clement became interested in the story in 1909, when he was PRR assistant supervisor in Paoli. He solicited in local newspapers for informants about the event, and got statements from older railroaders about what they had heard of the tragedy. The file is enumerated as follows: Pennsylvania Railroad file no. 004.01 C “History of ‘Duffy’s Cut’ stone enclosure east of Malvern, Pa., which marks the burial place of 57 track laborers who were victims of the cholera epidemic of 1832.”²⁹

Various statements within the file indicate the importance of Irish immigrant and PRR track laborer Patrick Doyle in preserving the story, as in 1870 Doyle had learned of the event and had solicited funds from his colleagues to erect an octagonal wooden fence around the presumed burial spot. This fence was repaired several times, and then in 1909 it

was replaced by Clement with a square stone enclosure that utilized the old P&C stone sleepers. Doyle’s sister Bridget was married to George Donahue, with whom Clement lived in Frazer during his time as PRR assistant supervisor circa 1909.³⁰ The various details included in the file include the number of 57 Irishmen who died; that the men were recently arrived; that Duffy was the contractor; that it was cholera that killed the men; that Sisters of Charity were involved in an effort to help the men; that the closing of doors on the men occurred (a kind of quarantine, and thereby a denial of care); and speculations about the location of the mass grave being “where they were making the fill.”

After Clement assembled the file, his request for a plaque to be placed at the site was rejected by the railroad. When he was PRR president, Clement himself later kept the file off-limits to the public, and the file’s second page includes the telling statement that “it is not desired to let it get out of the office.”³¹

A dim recollection of the event survived in local Chester County folklore and among railroaders until 2003, when a group of academicians headquartered at Immaculata University formed “The Duffy’s Cut Project” to investigate the event using archival and archaeological evidence.³² The university campus lies west of Paoli, Pa., near the former Pennsylvania Railroad Philadelphia-Harrisburg, Pa., main line, originally part of the P&C and now owned and operated by Amtrak as its “Keystone Corridor.” A Pennsylvania state historical marker was obtained for the site in 2004, and an excavation began that year to search for the remains of the shanty and work site, and also for the mass grave.³³ The land where the shanty was located is today private property adjoining the Amtrak right of way, while the stone enclosure sits on the Amtrak right of way. A remnant of the P&C 1830s fill survives in the eastern end of the valley, on the private property.

The Duffy’s Cut Dig and Reburial

The archaeological dig commenced with the assistance of the Chester County Emerald Society in the valley adjacent to the stone enclosure on August 18, 2004, the very day on which the Pennsylvania state marker was placed at the intersection of King and Sugartown roads in Willistown Township. The valley where the private property is located is within East Whiteland Township. From 2004 to 2008, the shanty area was located, along with hundreds of artifacts relating to the work crew and the early railroad, which artifacts are now housed in the Immaculata University Duffy’s Cut Museum.³⁴

Among the artifacts excavated near the surviving P&C fill were a piece of Morris & Essex-type cast iron track (like the kind described in Sachse’s “Last Relic” article), stone spikes, and early locomotive pieces. Beginning in 2005, items relating to the workers were excavated within the shanty area. A substantial number of clay pipe bowls

and pipe stems were located, some with Irish logos on them such as the harp and shamrock, including one bowl with the *Erin go bragh* flag on it and a pipe stem marked “Derry.”

Using suggestions of the probable location of the graves in railroader testimony in the PRR file, which said the men were buried “where they were making the fill,” GPR (ground-penetrating radar) images of subsurface anomalies were obtained in several areas of the surviving P&C fill in December 2008.³⁵ The most likely area of geological interest was an area where a “stopping void” was apparent, where it appeared that once-solid organic matter (such as a body) had dissolved and left an empty space, and the remaining organic matter (such as bones) remained at the bottom.

This area of greatest interest was in the eastern end of the valley, about 30 yards west and down the slope from the stone enclosure, and about six yards north of the shanty area where the artifacts had been located. There was no record at that location of any other prior burials, and no burials could have occurred within the fill prior to its creation in 1832-1833, or subsequent to the opening of the line in 1834, when trains passed over the spot. Each of these sets of human remains was buried in a coffin, with the head in the west and feet in the east, and each showed blunt force trauma (one a gunshot wound also), but none had defensive wounds. A substantial number of nails were used to seal the coffins, perhaps because they were sealed in haste to ensure that the lids would not be opened by those who buried the workers. Five were men, one was a woman (possibly a laundress and/or cook), and one was largely degraded and presented only a stain.³⁶

Using the GPR data, the first set of remains (SK001) was located on March 20, 2009, and excavated on March 20-May 13. The physical evidence showed this was a male, about 18 years of age, about 5' 6" tall, heavily muscled (indicating a manual laboring background), who had an unhealed ear infection, and had evidence of a perimortem (at or near the time of death) blow to his cranium. The remains included a shoe buckle and a small fibula pants clasp. He also had an M1 agenesis, a rare dental anomaly in which he was born without his right top front molar.

The second and third set of remains (SK002 and SK003) were located on the basis of a second GPR survey about five feet northwest of the first set of remains on July 22, 2009, and excavated on August 12-15. The remains of SK002 were partial, but SK003 was more complete like SK001. The skull of SK003 showed signs of a severe perimortem blow to the head which undoubtedly caused the death of the man. His physical structure was similar to that of SK001, but a few years older and slightly shorter.

A fourth and fifth set of remains (SK004 and SK005) were located on August 15. SK004 was largely degraded, and SK005 was temporarily unreachable due to the remains being enwrapped in the roots of a large 120-foot-tall tulip poplar with a double trunk. SK002, SK003, SK004, and

SK005 provided rich organic soil which nourished the tulip poplar.

On July 8-9, 2010, two more sets of remains were located, SK006 and SK007, which were excavated on August 20-25. SK006 was a tall man, around 6 feet tall, and he suffered an axe blow to the side of his head and a bullet wound directly on the top of his head. SK007 was a woman, and she also suffered perimortem blows to her head.³⁷

The tulip poplar over SK005 was removed in stages in July-August 2011. The excavation of SK005 took from July 2011 to February 2012. SK005 was a man, and his remains were enwrapped by the roots of the tree, which ensured that his skull came out in fragmentary form. The first bone of SK005 since 2009 was excavated on August 17, and on August 20, a barlow knife was excavated in the hip region, suggesting he had been buried with the knife in



ABOVE: Excavation of SK006 in August 2010. William E. Watson

BELOW: Irish pipe bowl found by the author in November 2005. Earl Schandelmeier



his right pocket. Pewter buttons were excavated on August 17 and 22, on the right side of the body, possibly suggesting a haversack. On August 26, the remaining 40 feet of the tree was removed, and on September 16, the skull was excavated. The tree roots were pulled up on February 8, 2012, and on February 10, the last bone (a small foot bone) was excavated.

Forensic analysis on each set of remains shows that the individuals were each murdered by blunt-force trauma, specifically, blows to the head by implements such as shovels, picks, and axes, with one man (the six-foot-tall individual) also being shot. Workers along the Baltimore & Ohio Railroad who contracted cholera in 1832 were reported to have been led away from their colleagues to die alone, and there are instances in newspapers of family members taking their relatives into a barn to die alone.³⁸ However unpalatable denial of care of victims in 1832 is to modern sensibilities, violence against individuals suspected of having cholera in the 1832 epidemic was also not uncommon. Charles Rosenberg refers in his seminal work *The Cholera Years* to an instance during the epidemic in the city of Chester, Pa., (Delaware County), in which immigrants merely suspected of having cholera were killed, as was the man harboring them.³⁹ There are specific instances of such activity reported in Chester County during the epidemic as well.

The *Philadelphia Inquirer* published a piece on November 6, 1832, that originally appeared in the *Chester County Democrat*:

Unparalleled Barbarity. –The Chester County Democrat contains a horrid account of murder and incendiarism, equaling in enormity, if the details are void of exaggeration, the most barbarous cruelties practiced among hostile savages. The victims are represented to have been an old man and his family, who had some months before settled in the neighborhood, and the populace the instruments of this atrocious villainy. They suspected that these emigrants, though in perfect health, were under the influence of the epidemic which has scourged the Atlantic cities. A universal panic ensued. The dread of contagion prompted the neighbors to close their doors against the old man and his family, and to avoid all intercourse with them. They were soon driven from their dwelling, wandering about without shelter. A humble mechanic received the distressed family into his house, which was surrounded in the dead of night by a mob, who rushed in, murdered the owner, the old man, and his family; and then fired the building, which was reduced to ashes. The writer of the account states that on the next day might be seen the bones of the miserable victims blackened by the smoke of the smoldering ruins, lying exposed to the public gaze. It is understood that the ringleaders have been arrested.⁴⁰

The original piece in the *Chester County Democrat* has not survived. There is no record of a prosecution of the “ringleaders” in the Chester County Courthouse records,

and furthermore, the *Philadelphia Inquirer* published a “correction” on November 15 that originally appeared in the *Village Record*:

An article is going the rounds stating that Murder and Incendiarism have been committed in County – and to the *Chester County Democrat*, credit is given for the statement. The article as published would certainly lead to the belief, that the grossest outrages had been committed in our peaceable County of Chester, contrary to its general character. The truth is, that the article published in the Democrat, was intended as an Allegory, or species of wit – and we are told tho’ we confess we were unable to gather the opinion from the article, that the old man and his family, were intended to represent the Masonic Fraternity.⁴¹

Nevertheless, despite contemporary corrections and obfuscation intended to protect reputations of individuals and of the railroad itself, the graves of railroaders murdered during the 1832 epidemic, were found in the 1832 fill some 180 years later. Any individuals who would have been convicted of such crimes in 1832 would have been hanged, and the railroad would have found it increasingly difficult to recruit Irish labor if the story made its way back across the Atlantic. So, the story was swept under the carpet, Duffy continued to receive P&C contracts, and the narrative remained merely a subtext of railroad and Chester County folklore for almost two centuries.

Five of the sets of remains excavated at Duffy’s Cut were buried in West Laurel Hill Cemetery under an imported Celtic Cross made of Kilkenny limestone on March 9, 2012.⁴² Teeth were extracted from each set of remains and are currently being scrutinized by physical anthropologists, and both DNA and isotope studies are continuing.

One set of remains, SK001, was buried in Holy Family Cemetery in Ardara, Donegal, Ireland, on March 3, 2013, in a symbolic gesture on behalf of all the workers who died at Duffy’s Cut.⁴³ An extensive GPR survey of the area of Clement’s stone wall indicates the probable presence of the remaining workers’ graves in a large anomaly 20 feet below the current level, stretching in an arc around the wall, some 50 feet south of the current tracks. It is possible that most of the men buried beneath the wall died of cholera, as reported at the time, and that they were buried as in other cholera mass graves at the time, without coffins, and like Napoleonic War or American Civil War mass graves (or, indeed, like the nearby Paoli Massacre mass grave from the 1777 Revolutionary War battle).

It is possible that the seven graves within the fill reflect the first individuals buried, and that Sachse’s narrative of the men fleeing camp and essentially being forced back into the valley to die reflects a quarantine gone wrong. The East Whiteland Horse Company, the local vigilante company, operated nearby, and could have easily established a quarantine around the valley.

The loss of sources and the differences in number of casualties reported in the sources is striking, considering the atmosphere of straightforward reporting of the epidemic elsewhere, and possibly suggests a cover-up. The railroad's claim that all the 57 men working in the valley died is important too, when the usual number of casualties in a cholera outbreak is between 40 and 60 percent. It is likely that the rest of Duffy's men working on the mile above the valley would have fled when cholera made its appearance. They certainly could not be so easily contained as men working in the valley. The initial *Village Record* story, perhaps dating from October 3, has vanished in its entirety, while only the November 7 correction survives. The Ogden diary also has disappeared, although Clement mentioned its existence in 1909. Obfuscation about numbers of deaths at Duffy's Cut is out of the norm in 1832 reportage of the cholera epidemic. If it were simply a natural disaster, then it would have been covered in newspapers as matter-of-factly as the even larger numbers of cases and deaths on August 6 and 7, discussed in newspapers in the Philadelphia region. Mitchell himself stated in 1833 that Duffy lost half of a crew that typically would have numbered 100 to 120 men. In 1909, Clement specifically noted 57 deaths in his file on the event.

The railroaders' testimony stands in contrast to the November 7 *Village Record* correction that only eight men died. It is conceivable that the November 7 *Village Record* article referred only to the initial burials within the fill, murders that could have occurred in a scenario of chaos outside of the valley, unbeknownst to those Irish workers who remained in the valley. The bodies excavated in the fill showed no signs of defensive wounds, possibly suggesting that they were tied up prior to their murder. They were probably buried by their comrades, who did not

The story of Duffy's Cut survived because later generations of railroaders would not forget what happened to the Irish laborers in 1832. Irish immigrant and Pennsylvania Railroad track laborer Patrick Doyle was the first to try to commemorate his countrymen in 1870 by erecting a wooden fence around the mass grave. In 1909, a PRR assistant supervisor in Paoli, Martin Withington Clement (1881-1966), replaced Doyle's fence with a stone enclosure that still stands (constructed of stone sleepers), and he also created a secret Pennsylvania Railroad file on the story. Clement later became president of the PRR (1935-1949) and my grandfather, Joseph Tripician, was Clement's executive assistant. Tripician later became Manager, Wage and Salary Administration and Director of Personnel.

When PRR became bankrupt after merger with the New York Central Railroad, and its assets were sold, my grandfather was able to take what he wanted from the vault before the historical memorabilia went to auction. One of the items he took was the PRR Duffy's Cut file. My brother, Rev. Dr. J. Frank Watson, inherited the file, and he showed



The March 2013 reburial of John Ruddy's remains (SK001) in Holy Family Cemetery, Ardara, Donegal, Ireland, with Father Austin Laverty officiating and funeral director Kieran Shovlin in attendance. William E. Watson

know that they had been killed and who assumed that they had died of cholera. The practice of burying men in the fill where they worked of course became the common custom among railroaders of later generations. The eight burials described in the *Village Record* might have been seen by enough people in the community that the newspaper had

it to me in 2002. I am a history professor at Immaculata University, a short distance from Duffy's Cut, and so we enlisted my colleagues at Immaculata, Irish historian John Ahtes, and my departmental assistant, Earl Schandelmeier, to conduct research and obtain a state historical marker in 2004. We got a great deal of assistance from the Chester County Emerald Society to obtain the marker.

We also received permission to excavate the site and search for the men in 2004. In time, dozens of my students participated in the dig and the archival work. In 2008, we received assistance from geologist Tim Bechtel to find the men, and his GPR survey found the first seven graves. Tim got us help from physical anthropologist Janet Monge of the University of Pennsylvania Museum, and her assistant Samantha Cox. We also received help from Matt Patterson, a forensic dentist formerly with the Navy, and Norman Goodman (former deputy coroner of Chester County). The Donegal Society of Philadelphia, particularly Kathy Burns and Vince Gallagher, made possible the return of one set of remains back to Ireland in March 2013. —William E. Watson

to mention those deaths, but the deaths of the remaining 49 men occurred down in the valley, out of sight of the neighbors, and therefore might be written out of the public record. Questions about the remaining 49 men might be answered someday if it becomes possible to excavate under Clement's wall. ♦

Notes

1. See Albert J. Churella, *The Pennsylvania Railroad, Volume 1, Building an Empire* (Philadelphia: the University of Pennsylvania Press, 2013), pp. 21-44; David W. Messer, *Triumph II: Philadelphia to Harrisburg 1828-1998* (Baltimore: Barnard, Roberts and Co., 1999), pp. 9-30; William B. Sipes, *The Pennsylvania Railroad: Its Origin, Construction, and Connections* (Philadelphia: The Passenger Department, 1875); William E. Watson, J. Francis Watson, John H. Ahtes, Earl H. Schandelmeier, *The Ghosts of Duffy's Cut* (Westport, Conn.: Praeger Publishers, 2006), pp. 1-17.
2. An excellent early source on the railroad in Pennsylvania is William Hasell Wilson, *The Columbia-Philadelphia Railroad and its Successor* (originally entitled *Reminiscences of A Railroad Engineer* in 1896) (York, Pa., 1985; reprinted 1992).
3. Churella, *The Pennsylvania Railroad*, pp. 36-41. For canals in general, see Carter Goodrich, *Canals and American Economic Development* (New York: Columbia University Press, 1961).
4. Joseph F. Tripician, "History and Development of the Pennsylvania Railroad," unpublished manuscript in the collections of the Hagley Museum and the Railroad Museum of Pennsylvania.
5. Messer writes also that the delayed completion of the railroad was "due to bad weather, balky contractors and labor shortages." See David W. Messer, *Triumph II*, p. 14. Early criticism of corruption in the P&C is found in Egbert Hedge, *Sketch of a Railway, Judiciously Constructed Between Desirable Points, Exemplified by a Map and an Appendix of Facts* (New York: Railroad Journal, 1841), pp. 13, 27, 45, 46, 96-98.
6. For the survival of the stone sleepers along the route of the Philadelphia & Columbia line near Philadelphia, see John C. Trautwine, *The Philadelphia and Columbia Railroad of 1834* (Philadelphia: City History Society of Philadelphia, 1925).
7. For Irish immigration, see Kerby A. Miller, *Emigrants and Exiles: Ireland and the Irish Exodus to North America* (New York: Oxford University Press, 1985).
8. *Census of 1870, Philadelphia County* (Eighty-First District), Pa.. On microfilm, National Archives and Records Administration, Mid-Atlantic Branch, Philadelphia. Duffy's final residence (1715 William St.) and place of burial (St. Anne's Cemetery) are listed in the 1871 *Philadelphia Death Index*. On microfilm, Philadelphia City Archives, Philadelphia.
9. Duffy's P&C contracts are available on microfilm at the Pennsylvania State Archives in Harrisburg, Pa., in Record Group 17, Records of the Board of Canal Commissioners, Philadelphia and Columbia Railroad.
10. For Duffy's work on the West Chester Railroad, see *American Republican* newspaper (1831; no specific month or day available). In the Railroad Clipping Files at the Chester County Historical Society, West Chester, Pa.; "The West Chester Rail Road," in Chester County Collections, no. 16 (West Chester Bureau of Historical Research, October, 1939), pp. 497-503. The author wishes to express thanks to Dr. James Jones of the History Department of West Chester University for this information. While the Reading Railroad contractor files have not survived, there is evidence that Duffy helped to bring Irishmen over to Philadelphia specifically to work on the Reading Railroad, in the Port Richmond neighborhood.
11. *American Republican* newspaper (June 9, 1829). In the Railroad Clipping Files at the Chester County Historical Society, West Chester, Pa.
12. *Census of 1830*, Willistown Township, Chester County, Pa. On microfilm, Reading Room, Chester County Historical Society.
13. Contract for Miles 59 and 60, Philadelphia and Columbia Railroad. Record Group 17, Records of the Board of the Canal Commissioners, Columbia and Philadelphia Railroad. On microfilm, Pennsylvania State Archives, Harrisburg, Pa.
14. Julian F. Sachse, "The Last Relic of the Pennsylvania Railroad Originally Called the Philadelphia and Columbia Railway," in Pennsylvania Railroad File No. 004.01 "C," "History of Duffy's Cut Stone enclosure east of Malvern, Pa., which marks the burial place of 57 track laborers who were victims of the cholera epidemic of 1832," in the collection of Rev. Dr. J. Francis Watson.
15. Julian F. Sachse, "The Legend about Duffy's Cut on the Pennsylvania Railroad Between Malvern and Frazer," *Village Record* (May 3, 1889). In the Railroad Clipping Files at the Chester County Historical Society, West Chester, Pa. Text also in Pennsylvania Railroad File No. 004.01 "C," "History of Duffy's Cut Stone enclosure east of Malvern, Pa., which marks the burial place of 57 track laborers who were victims of the cholera epidemic of 1832," in the collection of Rev. Dr. J. Francis Watson. Transcribed in Watson *et. al.*, *The Ghosts of Duffy's Cut*, pp. 159-174.
16. The *John Stamp* passenger list is on microfilm at the National Archives and Record Administration, Philadelphia. The advertisement for its voyage to Philadelphia appeared in the *Londonderry Sentinel* in March 1832, and its arrival in Philadelphia was noted in the *Belfast Newsletter* (July 24, 1832). The author wishes to thank Dave Farrell of Tile Films, Dublin, for this information.
17. See William E. Watson, "The Sisters of Charity, the 1832 Cholera Epidemic in Philadelphia and Duffy's Cut," in *The U.S. Catholic Historian* (Fall 2009), v. 27, no. 4, 1-16; on cholera and immigrants: Alan M. Kraut, *Silent Travelers: Germs, Genes, and the "Immigrant Menace"* (Baltimore: Johns Hopkins, 1994).
18. Watson *et. al.*, *The Ghosts of Duffy's Cut* ch. 6, "A Chastisement for the Sins of the People': Cholera in Pennsylvania, 1832," pp. 79-95.
19. Sachse, "The Legend about Duffy's Cut."
20. *National Gazette and Literary Register* newspaper (September 6, 1832). On microfilm, Central Newspaper Center, Free Library of Philadelphia, Philadelphia. Main Branch of the Philadelphia Public Library, Philadelphia.
21. The Ogden diary is referenced by Clement in the Pennsylvania Railroad File No. 004.01 "C," "History of Duffy's Cut Stone

- enclosure east of Malvern, Pa., which marks the burial place of 57 track laborers who were victims of the cholera epidemic of 1832,” in the collection of Rev. Dr. J. Francis Watson.
22. Watson *et. al.*, *The Ghosts of Duffy's Cut*, pp. 47, 191.
 23. “Resolution for the relief of WILLIAM B. MITCHELL” (April 9, 1833) *The Statutes at Large of Pennsylvania*, Harrisburg, Pa., 1911, Laws Passed Session 1832-1833, at <http://www.rootsweb.com/~usgenweb/pa/pafiles.htm>.
 24. Sachse, “The Legend about Duffy's Cut”
 25. Sachse, “The Legend about Duffy's Cut.” For the Sisters' work in Philadelphia, see the documents in “The Sisters of Charity and the Cholera in Baltimore and Philadelphia, 1832,” in *American Catholic Historical Researches* vol. 14 (Philadelphia: Martin I. J. Griffin, 1897), pp. 113-117; “An Interesting and Little Known Chapter in the History of Philadelphia Charities – The Epidemic of Cholera, 1832 – Services of Sisters of Charity at The Philadelphia Almshouse and Hospital (Blockley), in *Year Book for Nineteen Twenty-Three in Aid of All Saints Chapel, Philadelphia General Hospital* (Philadelphia, 1923), unpaginated.
 26. *Village Record* newspaper (Nov. 7, 1832) in the Railroad Clipping Files at the Chester County Historical Society, West Chester, Pa.
 27. *Ibid*
 28. “William B. Mitchell rel. to the Percentage of Philip Duffy, 1833” (no month or day). Record Group 17, Records of the Board of the Canal Commissioners, Divisional Records. On microfilm, Pennsylvania State Archives, Harrisburg, Pa.
 29. Watson *et. al.*, *The Ghosts of Duffy's Cut*, pp. 100-104.
 30. *Ibid*.
 31. Pennsylvania Railroad Duffy's Cut file, p. 2.
 32. Duffy's Cut Project website: <http://duffyscut.immaculata.edu> Original project team members were historians William Watson, Frank Watson, John Ahtes, and Earl Schandelmeier. The project was headquartered at Immaculata University. Geologist Tim Bechtel joined the team in 2008, and in 2009 they were joined by forensic anthropologist Janet Monge and her assistant Samantha Cox, as well as by forensic dentists Matthew Patterson and Norman Goodman. Chester County Park Ranger Robert McAllister also assisted in courthouse searches and archival work with the team. Many students from Immaculata have participated in the excavation since 2004.
 33. “Duffy's Cut Mass Grave,” Pennsylvania Historical Commission Marker Division, Explore PAHistory.com, <http://explorepahistory.com/hmarker.php?markerId=1-A-1D4>
 34. Meeting with Curator Kurt Bell at the Railroad Museum of Pennsylvania, Strasburg, Pa., September 22, 2004; correspondence with John Hankey, former director, Baltimore & Ohio Railroad Museum. Jessica McRorie, “New Artifacts Unearthed at Duffy's Cut,” *Daily Local News*, West Chester, Pa. (Nov. 15, 2004), p. 1; Samuel Hughes, “Bones Beneath the Tracks,” *Pennsylvania Gazette* (Nov./Dec. 2010), pp. 34-43; Dan Barry, “With Shovels and Science, a Grim Story is Told,” *New York Times* (March 25, 2013), pp. A12 and A15; Abigail Tucker, “Ireland's Forgotten Sons,” *The Smithsonian* (April 2010), vol. 41, no. 1, pp. 14-18.
 35. Tim Bechtel of Enviroscan, Lancaster, Pa., provided the GPR surveys at the site. His survey data will be published in a forthcoming project volume. His website includes mention of Duffy's Cut: <http://www.enviroscan.com/html/historical.html>.
 36. Janet Monge, bone curator of the University of Pennsylvania Museum, did the forensic analysis of the remains, along with her assistant Samantha Cox, and Matthew Patterson, formerly with the U.S. Navy, and former Deputy Coroner of Chester County, Norman Goodman. Monge's analysis is discussed in “Dead Men of Duffy's Cut,” <http://www.penn.museum/research/physical-anthropology/813-dead-men-of-duffys-cut.html> and “179 Years Later, Closure at Duffy's Cut,” <https://www.sas.upenn.edu/anthropology/content/179-years-later-closure-duffys-cut>. Monge's research will be published in a forthcoming project volume.
 37. *Ibid*, and AOL.com top news story on Wednesday, August 25, 2010: David Lohr, “Pennsylvania Ghost Story Leads to Murder Mystery,” AOL News, <http://www.aolnews.com/nation/article/duffys-cut-mass-grave-in-pennsylvania-did-irish-immigrants-die-of-cholera-or-were-they-murdered/19606498>; Ray O'Hanlon, “It was murder,” *The Irish Echo* (August 18, 2010), p. 1; Kristen Holmes, “19th-century Chesco crime,” *The Philadelphia Inquirer* (August 19, 2010), pp. B1-B2; Jim Callahan, “New findings at Duffy's Cut provide age-old clues,” *Daily Local News* (August 23, 2010), pp. A1 and A5; Jonathan Valania, “Murder in the Time of Cholera,” *Philadelphia Weekly* (August 18, 2010), pp. 9-12; J.F. Pirro, “Lost and Found,” *Main Line Today* (May 2010), vol. 15, no. 5, pp. 94-102.
 38. James D. Dilts, *The Great Road: The Building of the Baltimore and Ohio, the Nation's First Railroad, 1828-1855* (Stanford, Calif.: Stanford University Press, 1993), p. 193.
 39. Charles E. Rosenberg, *The Cholera Years: The United States in 1832, 1849, and 1866* (Chicago: the University of Chicago Press, 1987), p. 37.
 40. “Unparalleled Barbarity,” in *Philadelphia Inquirer* (November 6, 1832) On microfilm, Central Newspaper Center, Free Library of Philadelphia, Philadelphia. Main Branch of the Philadelphia Public Library, Philadelphia. The author wishes to thank to Christine E. Johnson, Librarian, Roxborough Memorial Hospital School of Nursing, Philadelphia.
 41. “Admirable Sentiments,” in *Philadelphia Inquirer* (November 15, 1832) On microfilm, Central Newspaper Center, Free Library of Philadelphia, Philadelphia. Main Branch of the Philadelphia Public Library, Philadelphia. The author again wishes to thank to Christine E. Johnson, Librarian, Roxborough Memorial Hospital School of Nursing, Philadelphia.
 42. The West Laurel Hill Cemetery reburial in 2012 was widely covered in the media. Among the pieces, see Kathy Matheson, Associated Press, March 9, 2009, “Duffy's Cut remains re-buried in Main Line cemetery,” <http://www.dailylocal.com/article/20120309/NEWS01/120309582/duffy-s-cut-remains-re-buried-in-main-line-cemetery>; Ray O'Hanlon, “A Solemn Reburial,” *The Irish Echo* (March 7, 2009), p. 1: <http://irishecho.com/?p=70140>.
 43. The reburial at Holy Family Cemetery in Ardara, Donegal, Ireland, on March 2, 2013, was also widely covered in the media, including RTE News: <http://www.youtube.com/watch?v=wOxIhknwT98>.