

# A STUDY ON THE SUFFERING OF JESUS

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Years ago, when I first set out to learn as much as possible about Jesus' death and resurrection, I began to run across articles dealing with different medical and scientific aspects of the crucifixion. I was fascinated by the details and their ability to change how I viewed the event. I hope sharing what I have learned will do the same for the reader.

What follows is a compilation of information I have gleaned from scholars and experts who have thoroughly studied the crucifixion from their perspectives in various scientific disciplines. Reviewing their data, we will follow the crucifixion from when Jesus was flogged to the removal of His body from the cross.

## Different Types of Floggings

Most executions involved floggings beforehand.<sup>1</sup> The Romans were known to practice floggings of differing severities,<sup>2</sup> and Jesus likely experienced two floggings: a lighter *fustigatio* followed by a harsher *verberatio*.<sup>3</sup>

Jesus was generally healthy before the floggings began, although the preceding night's events had

physically and emotionally weakened Him.<sup>4</sup> The combined impact of two separate beatings might help explain His weakness while attempting to carry the *paticulum* to Golgotha later in the day.<sup>5</sup>

According to one description, wooden staves were sometimes used in the *fustigatio*.<sup>6</sup> It is possible, then, that when Pilate allowed Jesus to be beaten the first time in order to teach Him a lesson and placate the crowd,<sup>7</sup> He was beaten with staves.

## The Verberatio

Once Pilate condemned Jesus to die, He was beaten a second time in preparation for the crucifixion.<sup>8</sup> This beating would likely be classified as a *verberatio*, and it would have been much more severe than the first one.<sup>9</sup>

When a *verberatio* began, the victim was stripped, and his hands were restrained by tying them to a post above his head.<sup>10</sup> Then, according to one study by William Edwards et al., "the back, buttocks, and legs were flogged either by two soldiers (lictors) or by one who alternated positions."<sup>11</sup>

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<sup>1</sup> William D. Edwards, Wesley J. Gabel, and Floyd E Hosmer, "On the Physical Death of Jesus Christ," *The Journal of the American Medical Association* 255, no. 11 (21 Mar 1986): 1457; F.P. Retief and L. Cilliers, "The history and pathology of crucifixion," *South African Medical Journal* 93, no. 12 (Dec 2003): 939.

<sup>2</sup> Edwards et al., 1457; Retief and Cilliers, 940.

<sup>3</sup> David A. Croteau, "Is the Two-Floggings Hypothesis a Viable Option? A Reconstruction of the Order of the Floggings of Jesus," *Journal of the Evangelical Theological Society* 63, no. 4 (2020): 673. See John 19:1-5 for an account of the first flogging and Matthew 27:27-31 and Mark 15:16-20 for the second.

<sup>4</sup> Edwards et al., 1457; Cahleen Shrier, "The Science of the Crucifixion," Azusa Pacific University, 2002, <https://www.apu.edu/articles/the-science-of-the-crucifixion/>.

<sup>5</sup> Matthew 27:32; Mark 15:21; Luke 22:36; Croteau, 673.

<sup>6</sup> Edwards et al., 1457. This point is echoed in Retief and Cilliers, 939.

<sup>7</sup> John 19:1-5.

<sup>8</sup> Matthew 27:27-31; Mark 15:16-20.

<sup>9</sup> Croteau, 666.

<sup>10</sup> C. Truman Davis, *Arizona Medicine* 22, no. 3 (Mar 1965): 185; Edwards et al., 1457; Christos Papaloucas, Morfo Georgiou, and Kyriaki Pisteovou-Gompaki, "The correct anatomical representation of the crucifixion of Jesus proof via anatomical data," *Aristotle University Medical Journal* 38, no. 1 (Feb 2011): 43; Shrier; Retief and Cilliers, 939.

<sup>11</sup> Edwards et al., 1457. Echoed in Maslen and Mitchell, 185; Papaloucas et al., 43; Shrier; Retief and Cilliers, 939.

These *licitors*, the soldiers primarily responsible for the beating, used a *flagellum*—a whip made of leather straps that attached at the other end to objects like small metal balls and bits of bone.<sup>12</sup>

## External Injuries

The *verberatio* resulted in severe bruising that weakened the soft tissue of the victim's back until it tore, exposing even muscle and bone.<sup>13</sup> In Jesus' case, His skin was likely already fragile from experiencing hematomas (sweating tinged with blood) the night before.<sup>14</sup> This condition would have made the bruising and tearing even more severe than usual.

C. Truman Davis explains the severity of the injuries that would be inflicted:

*Finally the skin of the back is hanging in long ribbons and the entire area is an unrecognizable mass of torn, bleeding tissue. When it is determined by the centurion in charge that the prisoner is near death, the beating is finally stopped.*<sup>15</sup>

## Hypovolemia

Another direct result of the *verberatio* would be excessive blood loss, leading to hypovolemic shock.<sup>16</sup> Symptoms of hypovolemic shock can include lethargy, confusion, thirst, low urine output (oliguria), excessive sweating (hyperhidrosis), muscle cramps, abdominal pain, dangerously low blood pressure (hypotension), weak arterial pulse, elevated heart rate (tachycardia), chest pain, and intermittent loss of consciousness (syncope).<sup>17</sup>

The severity of the hypovolemic shock experienced by the victim could vary, and Edwards' report

states, "The extent of blood loss may well have determined how long the victim would survive on the cross."<sup>18</sup> Furthermore, it acknowledges that according to "the ancient Greek text [of I Peter 2:24 ...] the scourging of Jesus was particularly harsh."<sup>19</sup>

These facts suggest that Jesus' case of hypovolemic shock would be particularly severe, lending itself to an experience on the cross, the duration of which was *relatively* short but the experience of which was particularly agonizing.

## Additional Tortures Inflicted

Efforts to mock and humiliate the victim were commonplace around a crucifixion.<sup>20</sup> In Jesus' case, they mocked Him by feigning submission to Jesus as a would-be king.<sup>21</sup> The effect of this mockery was physical as well as psychological. Adrian Treloar writes: "Deep and prolific wounds occurred because of the torture prior to crucifixion."<sup>22</sup>

He was crowned with a crown of thorns.<sup>23</sup> This crown could have been fashioned from any number of thorny plants native to the region; regardless of the species involved, the intention was to cause the victim pain and shame. To that end, a crown of thorns would increase the bleeding due to the large number of blood vessels near the surface of the victim's head.<sup>24</sup>

The soldiers also mocked Him by putting a reed as a faux scepter in His hand.<sup>25</sup> Then they struck Him on

<sup>12</sup> Davis, 185; Edwards et al., 1457; Matthew W. Maslen and Piers D. Mitchell, "Medical theories on the cause of death in crucifixion," *Journal of the Royal Society of Medicine* 99 (Apr 2006): 186; Papaloucas et al., 43; Shrier; Retief and Cilliers, 939.

<sup>13</sup> Davis, 185; Edwards et al., 1457; Papaloucas et al., 43; Shrier; Retief and Cilliers, 939.

<sup>14</sup> Luke 22:44; Edwards et al., 1457; Shrier; Saugato Biswas, Trupti Surana, Abhishek De, and Falguni Nag, "A Curious Case of Sweating Blood," *Indian Journal of Dermatology*, 58, no. 6 (Nov-Dec 2013), 478–480.

<sup>15</sup> Davis, 185.

<sup>16</sup> Davis, 185; Edwards et al., 1457; Shrier.

<sup>17</sup> Barry Hill and Aby Mitchell, "Hypovolaemic shock," *British Journal of Nursing* 29, no. 10 (2020): 557-560.

<sup>18</sup> Edwards et al., 1457.

<sup>19</sup> *Ibid.*, 1457.

<sup>20</sup> Edwards et al., 1457; Retief and Cilliers, 940.

<sup>21</sup> Matthew 27:27-31; Mark 15:16-20.

<sup>22</sup> Adrian Treloar, *Catholic Medical Quarterly* 63, no. 1 (Feb 2013): 12.

<sup>23</sup> Matthew 27:29; Mark 15:17.

<sup>24</sup> Davis, 185; Shrier.

<sup>25</sup> Matthew 27:29.

the head with the reed.<sup>26</sup> Each blow drove the thorns deeper into His brow, exacerbating His injuries and increasing the blood loss.<sup>27</sup>

Another aspect of the mockery was to place a robe on Him to simulate a royal garment.<sup>28</sup> In the course of tormenting Jesus, they would place the robe over His back and shoulders, where it would inevitably become matted with the blood that oozed from His extensive collection of open wounds and began to clot. Ripping the robe from His back as they did would reopen His wounds and subject Him to further agony.<sup>29</sup>

Every aspect of the Romans' treatment of crucifixion victims—Jesus included—was designed to inflict physical and emotional torture in order to amuse themselves, punish the victims, and deter anyone else who might think of challenging Rome's authority.

## Carrying the Cross

The Roman cross consisted of two beams, one vertical and one horizontal. The vertical beam—called a *stipe*—was placed in the ground, often in a permanent position.<sup>30</sup> The horizontal beam—called a *patibulum*—was more affixed to the *stipe* during a crucifixion rather than being left in place. A small seat-like plank—called a *sedulum*—was also occasionally affixed to the *stipe*. According to Edwards, this was done “to prolong the crucifixion process.”<sup>31</sup>

Crucifixion victims were routinely made to carry the *patibulum* to the place of their crucifixion.<sup>32</sup> This arrangement not only served the Romans' practical

purpose of moving the heavy object, but it also helped them inflict further misery on their subject.

The *patibulum* would be tied to the victim's shoulders for the journey.<sup>33</sup> It would be difficult to carry long distances even under the best circumstances, as it could average 100 lbs. or more.<sup>34</sup>

In Jesus' case, the weight and the friction of the *patibulum* only exacerbated the severe injuries to His back and shoulders; shock and blood loss from the floggings interfered with His ability to carry the cross.<sup>35</sup> Ultimately, He could not manage the weight; He stumbled, and the Romans had to conscript another man to carry it for Him.<sup>36</sup>

As the victim was marched to the place of crucifixion, the torment continued. The Romans were fond of parading their victims to the cross naked, but in Judea, this would have offended Jewish sensibilities and incited rioting; consequently, crucifixion victims in Jerusalem were dressed in loincloths.<sup>37</sup> At the head of the procession, a *titulus* would be carried—a sign detailing the charges against the victim.<sup>38</sup> In Jesus' case, the *titulus* read, “Jesus the Nazarene, King of the Jews.”<sup>39</sup>

## The Crucifixion

The *patibulum* would be laid on the ground; then the victim would be thrown down on the ground to be affixed to it, allowing the dirt and debris on the ground to contaminate the wounds on the victim's back.<sup>40</sup> Victims were sometimes tied to the *patibulum*, while others, like Jesus, were attached with nails.<sup>41</sup>

<sup>26</sup> Matthew 27:29-30; Mark 15:19.

<sup>27</sup> Davis, 185.

<sup>28</sup> Matthew 27:28; Mark 15:17.

<sup>29</sup> Matthew 27:31; Mark 15:20; Davis, 185-186; Edwards et al., 1457; Shrier.

<sup>30</sup> Davis, 184; Edwards et al., 1457, 1459; Papaloucas et al., 43; Shrier; Retief and Cilliers, 939.

<sup>31</sup> Edwards et al., 1459. This point is echoed in Retief and Cilliers, 939.

<sup>32</sup> Edwards et al., 1457-1458; Maslen and Mitchell, 186; Shrier; Retief and Cilliers, 940.

<sup>33</sup> Davis, 186; Edwards et al., 1459; Retief and Cilliers, 940.

<sup>34</sup> Davis, 184; Edwards et al., 1457, 1459; Papaloucas et al., 43; Shrier; Retief and Cilliers, 939.

<sup>35</sup> Davis, 186; Edwards et al., 1461; Shrier.

<sup>36</sup> Matthew 27:31-32; Mark 15:20-21; Luke 23:26.

<sup>37</sup> Davis, 186; Edwards et al., 1458.

<sup>38</sup> Retief and Cilliers, 940.

<sup>39</sup> John 19:19. See also Matthew 27:37; Mark 15:26; Luke 23:38.

<sup>40</sup> Davis, 186; Edwards et al., 1459-1460; Shrier; Retief and Cilliers, 940.

<sup>41</sup> Davis, 184; Edwards et al., 1459-1460; Papaloucas et al., 43; Shrier; Retief and Cilliers, 939-940; Treloar, 12.

John's Gospel indicates that Jesus was nailed through the hands.<sup>42</sup> Contrary to artistic depictions, this does not mean the areas between the metacarpals around the palms. The soft tissue of the hands in that area could not support the victim's weight. However, the wrists were considered part of the hands.

A study by Christos Papaloucas et al. explains that the nails would have been driven through a segment of the wrist called the Distot's space, which it describes as "a free space enclosed by the capitates, lunate, triquetral and hamate bones of the wrist, [that allowed the nail to pass through] without fracturing any of them."<sup>43</sup> The position of the nail in proximity to the nerves would result in intense nerve pain and partial paralysis of the victim's hands.<sup>44</sup>

Davis explains the procedure that a skilled Roman executioner would use:

*He drives a heavy, square, wrought-iron nail through the wrist and deep into the wood. Quickly, he moves to the other side and repeats the action, being careful not to pull the arms too tightly, but to allow some flexion and movement. The patibulum is then lifted in place at the top of the stipe.*<sup>45</sup>

The soldiers lifted the *patibulum*, with the victim attached, to a suitable height using ladders or some other method, depending on the height of the cross.<sup>46</sup> The *patibulum* was then secured to the *stipe* with a joint or ropes.<sup>47</sup> Once the victim was elevated on the cross, his knees were flexed, and his feet were nailed into place—sometimes with a single nail driven through the

overlapped metatarsals of both feet or else with a nail into each foot on either side of the *stipe*.<sup>48</sup>

Finally, the *titulus* was prominently placed so passersby could read the charges against the victim.<sup>49</sup> Once in place, a victim could survive anywhere from a few hours to a few days, but according to Edwards, the length "appears to have been inversely related to the severity of the scourging."<sup>50</sup>

## The Time on the Cross

One issue often overlooked is the fact that crucifixion took place outside. Victims were at the mercy of the weather. In addition, many victims suffered irritation from insects or birds that they could not repel.<sup>51</sup> As awful as the exposure was, it was arguably the least awful aspect of the experience.

While He was on the cross, the Romans offered Jesus a drink—sour wine spiked with myrrh.<sup>52</sup> Given that myrrh can have an analgesic (pain relieving) effect,<sup>53</sup> this raises questions about why the Romans would offer Jesus anything that would lessen His pain. However, myrrh is only used as an analgesic in small quantities; on the other hand, researchers at the University of Helsinki noted that in larger quantities, myrrh rendered wine "as impossible to drink as gasoline."<sup>54</sup> Consequently, they concluded:

*The use of a sharp potion was not an uncommon practice. They knew that the crucified would be thirsty. For that purpose they had provided the wine mixed with myrrh. [...] It is a form of torture, which was part of the executioners' sadistic methods.*<sup>55</sup>

<sup>42</sup> John 20:25.

<sup>43</sup> Papaloucas et al., 44.

<sup>44</sup> Edwards et al., 1460; Treloar, 12.

<sup>45</sup> Davis, 186.

<sup>46</sup> Edwards et al., 1459; Shrier; Retief and Cilliers, 940.

<sup>47</sup> Edwards et al., 1459.

<sup>48</sup> Davis, 186; Edwards et al., 1459-1460; Maslen and Mitchell, 186-187; Papaloucas et al., 43; Shrier; Retief and Cilliers, 940.

<sup>49</sup> Davis, 186; Edwards et al., 1459; Shrier; Retief and Cilliers, 939-940.

<sup>50</sup> Edwards et al., 1460. This point is echoed in Retief and Cilliers, 938, 940.

<sup>51</sup> Edwards et al., 1460.

<sup>52</sup> Matthew 27:34; Mark 15:23; Luke 23:36.

<sup>53</sup> Piero Dolara, Cristina Luceri, Carla Ghelardini, Silvia Aiolli, Francesca Luceri, Maura Lodovici, Stefano Menichetti, and Maria Novella Romanelli, "Analgesic effects of myrrh," *Nature* 379, no. 6750 (4 Jan 1996): 29.

<sup>54</sup> Erkki Koskeniemi, Kirsi Nisula, and Jorma Toppari, "Wine Mixed with Myrrh (Mark 15.23) and Crurifragium (John 19.31-32): Two Details of the Passion Narratives," *Journal for the Study of the New Testament* 27, no. 4 (Jun 2005): 385.

<sup>55</sup> Koskeniemi et al., 386.

One of the symptoms of Jesus' hypovolemic shock was extreme thirst; in order to torment Him, they offered Him something undrinkable, which He refused.<sup>56</sup>

As the day wore on, the pain inflicted on Jesus with whips and nails was amplified by the excruciating pressure imposed on His joints as they were forced to support the weight of His entire body.<sup>57</sup> It is likely that this eventually pulled some of His bones out of joint.<sup>58</sup>

The nails in His extremities continued to irritate the sensorimotor median nerves (hands and arms) and the peroneal nerves (feet and legs), shooting pain throughout His body.<sup>59</sup> He could temporarily alleviate some pressure on His hands and arms by pushing up, but this would increase the pain in His feet and legs.<sup>60</sup>

Even this shifting back and forth to find momentary relief became increasingly difficult. Not only were the open wounds on His back continually rubbed against the *stipe*, but muscle cramps set in, causing great pain, and stress positions paralyzed different muscles, making it more difficult for Him to push up—or breathe.<sup>61</sup> Eventually, He could exhale only while raising Himself with great exertion, which would grow increasingly difficult.<sup>62</sup> Each time He spoke from the cross, it added to this strain on His respiratory system.<sup>63</sup>

As crucifixion progresses, carbon dioxide increases in the blood, displacing oxygen (anoxemia), damaging tissue, and making the body work even harder to breathe and circulate oxygenated blood.<sup>64</sup> Edwards explains:

*The major pathophysiologic effect of crucifixion, beyond the excruciating pain, was a marked interference with normal respiration, particularly exhalation. The weight of the body, pulling down on the out-stretched arms and shoulders, would tend*

*to fix the intercostal muscles in an inhalation state and thereby hinder passive exhalation. Accordingly, exhalation was primarily diaphragmatic, and breathing was shallow. It is likely that this form of respiration would not suffice and that hypercarbia would soon result. The onset of muscle cramps or tetanic contractions, due to fatigue and hypercarbia, would hinder respiration even further.*

*Adequate exhalation required lifting the body by pushing up on the feet and by flexing the elbows and adducting the shoulders. However, this maneuver would place the entire weight of the body on the tarsals and would produce searing pain. Furthermore, flexion of the elbows would cause rotation of the wrists about the iron nails and cause fiery pain along the damaged median nerves. Lifting of the body would also painfully scrape the scourged back against the rough wooden stipes. Muscle cramps and paresthesias of the outstretched and uplifted arms would add to the discomfort. As a result, each respiratory effort would become agonizing and tiring and lead eventually to asphyxia.<sup>65</sup>*

Throughout this process, whenever He repositioned Himself to breathe or ease the pressure on an extremity, it caused movement against the *stipe* that continually reopened the wounds on His back.<sup>66</sup>

Due to the position of the victim's body and the various injuries sustained throughout the ordeal, fluid eventually built up around the heart (pericardial effusion), putting pressure on the muscle (cardiac tamponade) and causing intense chest pain (angina pectoris).<sup>67</sup> Extreme dehydration and cardiac tamponade would cause the heart to struggle to pump blood adequately.<sup>68</sup>

As Jesus drew nearer to the end, all His symptoms would have intensified, including thirst. Because of this, Jesus was offered a drink of *posca*—wine vinegar mixed

<sup>56</sup> Matthew 27:34; Mark 15:23.

<sup>57</sup> Davis, 186; Papaloucas et al., 44; Shrier; Retief and Cilliers, 940.

<sup>58</sup> Shrier.

<sup>59</sup> Davis, 186; Edwards et al., 1460; Papaloucas et al., 44; Shrier; Retief and Cilliers, 940.

<sup>60</sup> Davis, 186; Papaloucas et al., 44; Treloar, 12.

<sup>61</sup> Davis, 186; Papaloucas et al., 44; Shrier; Retief and Cilliers, 940.

<sup>62</sup> Davis, 186; Papaloucas et al., 44; Shrier; Retief and Cilliers, 940; Treloar, 12.

<sup>63</sup> W. Reid Litchfield, "The Search for the Physical Cause of Jesus Christ's Death," *Brigham Young University Studies* 37, no. 4 (1997-1998): 97-98; Shrier.

<sup>64</sup> Davis, 186; Shrier; Retief and Cilliers, 941.

<sup>65</sup> Edwards et al., 1461.

<sup>66</sup> Davis, 187; Edwards et al., 1460; Retief and Cilliers, 940.

<sup>67</sup> Davis, 187; Shrier; Treloar, 12.

<sup>68</sup> Davis, 187.

with water, but this time without the myrrh.<sup>69</sup> He could undoubtedly feel the critical changes in His condition and knew that death was not far off.<sup>70</sup> Because of this, He was able to summon the final ounce of strength needed to announce His own death just before it occurred: “Father, into Your hands, I commend My spirit.”<sup>71</sup> Then He succumbed to His injuries, and He died.<sup>72</sup>

## Cause of Death

An autopsy report will generally try to establish a single cause of death as well as outline any contributing factors. In this case, it is impossible to determine these things with certainty. According to Matthew Maslen and Piers Mitchell:

*It is quite likely that different individuals died from different physiological causes, and we would expect that the orientation in which they were crucified would be crucial in this respect.*<sup>73</sup>

After looking at the research of the scholars cited here and the evidence unique to Jesus’ circumstances, the most likely cause of death in Jesus’ case seems to be cardiac arrhythmia (irregular heartbeat).<sup>74</sup> Numerous other factors certainly would have contributed to His death. Edwards writes:

*Each wound apparently was intended to produce intense agony, and the contributing causes of death were numerous.*<sup>75</sup>

These contributing factors included hypovolemia (low blood volume), asphyxia (suffocation), congestive heart failure, dehydration, exhaustion, and myocardial infarction (death of the heart muscle due to insufficient

blood flow).<sup>76</sup> All of these things would have worked together and weakened Jesus to the point that the arrhythmia was more than His body could stand.<sup>77</sup>

## The Aftermath

When the Romans were ready for this crucifixion to end, their intended method of ensuring the death of their victims was Crucifracture (breaking the tibia in each of the victim’s legs so he could no longer support himself to breathe). Crucifracture hastened death, being effective within a matter of minutes.<sup>78</sup> The Romans broke their other victims’ legs that day, but when they came to Jesus and saw Him dead, there was no need to break His.<sup>79</sup>

However, the Romans would have made sure He was dead when the time came to remove His body from the cross. Edwards writes, “The Roman guard would not leave the victim until they were sure of his death.”<sup>80</sup> The soldiers traditionally ensured death with a spear or lance through the chest.<sup>81</sup> That is what was done to Jesus.<sup>82</sup>

Davis explains that the spear would have been thrust “through the fifth interspace between the ribs, upward through the pericardium and into the heart.”<sup>83</sup> Had Jesus been alive at the time, this injury would have been unquestionably fatal. However, the description of the blood and water assures us that He was already dead.

The blood mentioned by John likely refers to the denser layer of erythrocytes (red blood cells) that are pulled down by gravity, pooling, while the water likely refers to the less dense layer of plasma that would rise to the top. Due to the force of gravity, the erythrocyte-rich

<sup>69</sup> Matthew 27:48; Mark 15:36; John 19:28-29; Davis, 187.

<sup>70</sup> Davis, 187.

<sup>71</sup> Luke 23:46.

<sup>72</sup> Matthew 27:50; Mark 15:37; Luke 23:46; John 19:30.

<sup>73</sup> Maslen and Mitchell, 188; Retief and Cilliers, 940.

<sup>74</sup> Edwards et al., 1461; Litchfield, 105–107. While Edwards includes this among the causes, Litchfield argues this is the most likely primary cause.

<sup>75</sup> Edwards et al., 1460.

<sup>76</sup> Davis, 187; Edwards et al., 1455, 1461; Retief and Cilliers, 938, 940-941; Shrier; Treloar, 12-14.

<sup>77</sup> Edwards et al., 1463.

<sup>78</sup> Davis, 187; Edwards et al., 1461; Maslen and Mitchell, 186; Retief and Cilliers, 938, 940-941; Treloar, 14.

<sup>79</sup> John 19:31-33.

<sup>80</sup> Edwards et al., 1459. This point is echoed in Retief and Cilliers, 938.

<sup>81</sup> Edwards et al., 1460; Retief and Cilliers, 938, 940; Treloar, 13.

<sup>82</sup> John 19:34.

<sup>83</sup> Davis, 187.

layer of liquid toward the bottom would spill out first when the chest cavity was punctured. John seemingly describes the effects of *livor mortis*, where gravity causes blood to pool and separate into its constituent parts in the absence of circulation. This process only begins post-mortem, and its effects are noticeable around an hour after the subject has died.<sup>84</sup>

There is no question that Jesus was dead before His body was removed from the cross. While the bodies of crucifixion victims were frequently left for scavengers, Edwards explains how Roman officials were known to permit the families to bury their dead upon request—as was the case with Jesus.<sup>85</sup>

## Conclusion

The purpose of a study like this is not merely to satisfy our intellectual curiosity about the crucifixion's medical and historical realities. It is certainly not offered for shock value. Instead, studying the realities of the crucifixion can be helpful in at least four ways.

- (1) It helps us to see the crucifixion of Jesus as the historical event it was rather than the unrooted story it frequently becomes.
- (2) It clarifies for us the ugliness of sin and its consequences, as well as the certainty of judgment.
- (3) It demonstrates the boundless love of the Savior, Who willingly endured this for our sake.
- (4) It makes the resurrection an even more spectacular victory over death when we are confronted with the harsh reality of that death.

I sincerely hope that anyone who reads this will use the details to put Jesus' death and resurrection in their proper perspective.

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<sup>84</sup> M. Lee Goff, "Early post-mortem changes and stages of decomposition in exposed cadavers," *Experimental and Applied Acarology* 49, no. 1-2 (Oct 2009): 23.

<sup>85</sup> Edwards et al., 1460. Echoed in Maslen and Mitchell, 186; Retief and Cilliers, 940.