

# Occupational health litigation and the development of occupational hygiene

## Slavery – Part 2B: Gold, silver and the Atlantic slave trade (New Spain)

**DW Stanton**

*Correspondence:* Dr David W Stanton, 401 Queensgate, 2 Queens Road, Parktown, South Africa, 2193.  
e-mail: davidws@icloud.com

*"I have in mind a province called Tepeaca,... from which they say more than 3 000 free men... have died on the road from carrying supplies to the mines. And in all the other places there are larger or smaller numbers of deaths, and those who have been in this country since the beginning swear that there are only half as many natives as there were."*<sup>1</sup>

**Don Fray Juan de Zumárraga, Bishop-elect of Mexico, 1529**

**Excerpt from a letter to the Spanish king, Charles V, providing information on the large numbers of deaths among Indians forced to work as pack animals to provide supplies for the gold mines of New Spain**

*"Mining, in short, is attended, according to the grave description of Plautus, with every pain which hell itself can inflict; and indeed, that poet designates the severe toils of the mine as the worst of the two. And they have accordingly served as a punishment for slaves, a torment for martyrs, and a means of revenge to tyrants."*<sup>2</sup>

**Lawyer and scholar, Francisco Xavier de Gamboa, 1761**

**Selected text from a description of working conditions at the Spanish silver mines of New Spain where he referred to the extreme wretchedness of the workmen, and the recklessness of the mine proprietors**

### BACKGROUND TO THIS SERIES OF PAPERS

The current silicosis litigation against gold-mining companies in South Africa influenced the author to explore factors that led to the poor working conditions in the mines that resulted in the litigation. This led to a series of papers focused on the historical development of occupational hygiene and occupational health litigation. With the millions of African slaves shipped to the Americas, many to work in the gold and silver mines, and the colonial history of South Africa, this series started by exploring slavery. In the 16th century, in an effort to protect the indigenous Indians working in mines in the Americas, Spanish missionaries proposed their replacement with African slaves. They also tried to improve the deadly working conditions for the Indians at the mines, which can be regarded as early examples of occupational hygiene practice. Silicosis was common at the silver mines and associated mercury mines (cinnabar ore being associated with sandstone), centuries before the start of gold mining on the Witwatersrand in 1886.

Part 1 of this paper on slavery reviewed *Slavery from Ancient Times*,<sup>3</sup> and Part 2A introduced *The North Atlantic slave trade and gold mining under the Spanish on the island of Hispaniola*.<sup>4</sup>

Part 2B focuses on Spanish America (New Spain and Peru) and starts by exploring slavery in the gold and silver mines of New Spain (now Mexico) during the early colonial period from the 1520s.

### GOLD AND SILVER MINING IN NEW SPAIN

Although it was the lure of gold that drew the Spanish to the Americas, it was silver that made them rich through their exploitation of the silver mines in Aztec New Spain and the so-called *Cerro Rico* (Rich Mountain) at Potosí, at the southern end of the Inca Empire (now Bolivia).<sup>5</sup> In New Spain, after the conquest and looting of the Aztecs, the Spanish directed their attention to the placer deposits of gold that had been worked by the Indians.<sup>6,7</sup> When these were depleted, they searched for the 'mother lodes' from which these placer deposits had arisen and found both gold and vast quantities of silver. A third of all the world's silver is thought to have been mined in Mexico, which is still the world's leading producer of this precious metal.<sup>8</sup> In 1546, silver was found in the rugged mountains at Zacatecas,<sup>9</sup> the silver-gold vein system of the Veta Madre at Guanajuato was discovered in 1550, and gold at El Oro near Mexico City, in 1521. Within a matter of years, gold

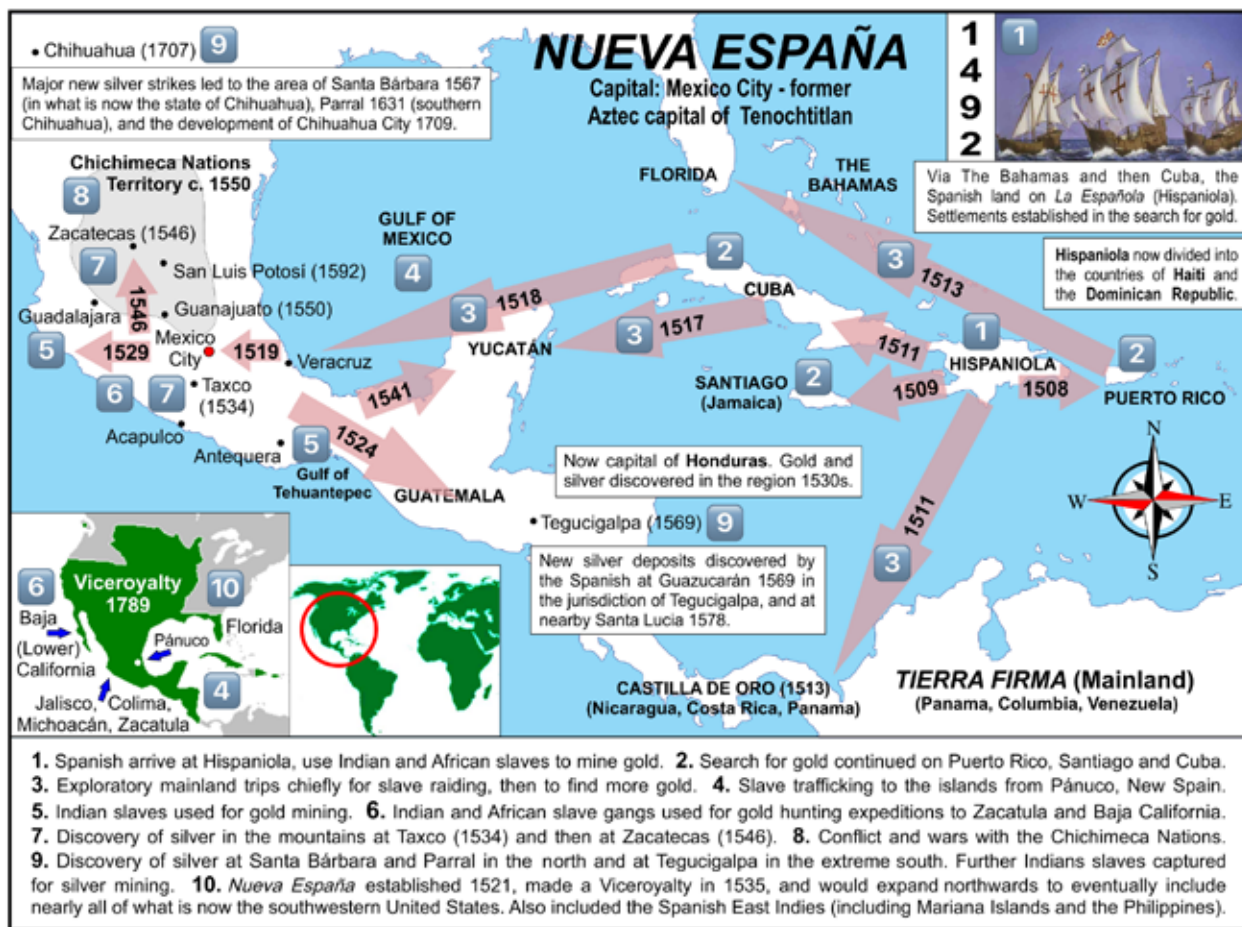


Figure 1. Gold, slaves, silver and Nueva España (New Spain)

Adapted from maps by d-maps.com and at Wikimedia Commons (16th century Spanish expansion in the Caribbean, and Chichimeca Nations)

and silver started to flow into the Spanish treasury.<sup>10</sup> Fourteen silver-mining centers opened in the 16th century, and four new centres between 1600 and 1800. New Spain's 453 silver mines stretched from Chihuahua in the north to Tegucigalpa in the extreme south (Figure 1).<sup>11</sup> An abundance of cheap labour was one of the cornerstones of the Spanish colonial system, from when the conquistadors conquered 'Mexico' for Spain in 1521, through to 1821, when Mexico became independent.<sup>12</sup>

### INDIAN SLAVES

As early as the 1520s, Spanish settlers began selling Indians to the slave traffickers of the Caribbean, who funneled many to the gold fields of Cuba and Hispaniola. Indian slaves were also traded for cattle from the islands. By about 1529, some nine or 10 thousand branded Indians from Pánuco, on the Gulf of Mexico, had been traded.<sup>13</sup> In his letter to Charles V in 1529, the Bishop-elect of Mexico, Don Fray Juan de Zumárraga, estimated that the number may have been higher as more than 21 ships had sailed, laden with slaves:

*"All that is known of the fate of the poor Indian vassals of your Majesty who have been taken from this country, is that three shiploads of them have sunk, and others have thrown themselves into the sea and drowned; and so would others do*

*if they were not watched and guarded and kept in prison by the Spaniards so that they will not kill themselves. Those who reach the islands, being very weak from hunger and thirst... and afflicted by the narrowness of their quarters, upon arriving at a land so foreign to their nature, catch diseases and pestilences, and all die."*<sup>1</sup>

The discovery of silver and gold deposits at Michoacán, Colima and Jalisco led to a gold rush to the west, and slave-catching gangs virtually depopulated large sections of the coast.<sup>1</sup> In the first few decades after the Conquest, captured and enslaved Indians were sent to the gold mines and *obrajes* (workshops), and were forced to work in slave gangs for gold-mining expeditions. Juan Garrido, the black African conquistador, gold miner and slave hunter,<sup>14,15</sup> led a slave gang on a gold-mining expedition to Zacatula in 1528 and led another, under Hernán Cortés, to Baja (Lower) California in 1533-1536.<sup>15</sup> Cortés, the conquistador who conquered 'Mexico' for Spain, employed some 400 Indian slaves at his Tehuantepec gold deposits in the 1540s.<sup>16</sup> A constant supply of slaves for the 'killing work of gold mining' was obtained initially from prisoners of war and, after pacification, by Spanish demand for tribute from villages:

*"So the slaves were brought forth and duly branded and sent off to the mines chained together."*<sup>1</sup>



**Figure 2. Exploitation of Mexico by Spanish Conquistadors, corridor mural, Palacio Nacional de Mexico, Mexico City, by Diego Rivera, completed 1951**

Source: Wikimedia Commons

To provide labour for the silver mines, in both New Spain and Peru, William Roberson wrote:

*"They were accordingly compelled to abandon their ancient habitations in the plains, and driven in crowds to the mountains. This sudden transition from the sultry climate of the valleys to the chill, penetrating air peculiar to high lands in the torrid zone; exorbitant labour, scanty or unwholesome nourishment, and the despondency occasioned by a species of oppression to which they were not accustomed, and of which they saw no end, affected them nearly as much as their less industrious countrymen in the islands."*<sup>17</sup>

Figure 2 is a famous mural that depicts the arrival of Cortés and the violence and exploitation of Indian slaves by Spanish conquerors, including slaves being used as load bearers and pickmen, whipped into submission, or hanged for disobedience. An African slave is held tightly in preparation for branding with a hot iron; another apprehensively awaits his turn. The *mestizo* (half Indian, half Spanish) baby boy represents the mixing of the races.<sup>18</sup>

In 1524, Spain created the *Council of the Indies* to exercise executive, legislative and judicial power on behalf of the monarchy in the colonies.<sup>19</sup> With the demographic collapse of indigenous populations, Dominicans, including Bartolomé de Las Casas, and other clerics, continued to pressurise the Spanish Crown to protect the Indians from exploitation.<sup>20,21</sup> In 1542, King Charles V issued the so-called *Leyes Nuevas* (*New*

*Laws of the Indies for the Good Treatment and Preservation of the Indians*) which forbade Indian slavery and sought to end the *encomienda* system (unsuccessfully) within a generation by outlawing the transference of *encomiendas* (grants of land and Indian tribute), through family inheritance.<sup>22</sup> Viceroyalties and *audiencias* (royal courts) were established within the *Council* to carry out the work of royal administration and justice.<sup>19</sup>

While the Spanish Crown enacted many laws to 'protect' indigenous populations, they fared no better than African slaves because the Spaniards found ways to enslave them.<sup>23</sup> Under the *New Laws*, Indians were allowed to sue for their freedom. On Hispaniola, the procurator had granted freedom automatically to all petitioners, but in New Spain, Indian slaves faced long and arduous legal battles. There was also reluctance to liberate Indians working the mines, out of fear of disrupting the colonial economy.<sup>13</sup> Slaves who went to Mexico City from the mines to request their freedom were sent back to their owners if their faces were branded, to face the wrath of their infuriated masters. Appointed judges in New Spain did release many Indians from slavery,<sup>13</sup> but a '*most vigorous protector of the Indians*' was Judge Alonso López de Cerrato (1490-1555) who presided over the *audiencias* of Santo Domingo, Hispaniola (1543-1547) and Guatemala, Central America (1548-1555).<sup>22,24,25</sup> Beside Las Casas, Cerrato ranks as the most ardent champion of Indian liberty of the 16th century.<sup>13</sup>

The Spanish invasion of the Chichimeca territory for silver

mining resulted in a war that lasted for more than three decades (1550-1585). Most Spaniards living at the frontiers so abhorred the Chichimecas, that they could only think to enslave or annihilate them. As silver mining developed, raids were conducted to capture slaves from nearby Indian camps:

*"Only healthy adults in their prime could be sold at a good price to work the mines so all others were left dead or with certain starvation without food as their camps were looted and then destroyed."*<sup>26</sup> With the appointment of Álvaro Manrique de Zúñiga, the 7th viceroy of New Spain in 1585, a pacification process took place; he prohibited the further enslavement of Indians and freed those who had been captured.<sup>26</sup> Incidents in which miners kidnapped Indians and forced them to work in slavery-like conditions occurred throughout the colonial period, but by the end of the 16th century, slavery was confined mainly to individuals of African descent.<sup>27</sup>

By the late 1570s, draft or forced Indian labour for mining was extensively organised through the *repartimiento* system under which about 4% of the people living in a given district contributed workers for 20 weeks in the year.<sup>28,29</sup> In a 1590s industry survey, there were over 9 000 mine workers, of which 68.5% were *naborías* (free Indian workers), 17.7% were *repartimiento*, and 13.8% were slaves.<sup>30</sup> The *repartimiento* was still employed intermittently in the 18th century, but had little importance because the mines relied on contractual labour.<sup>31</sup>

As Indians lost their lands, or failed to meet their tribute payments to the Crown, they were forced to hire out their labour, and by the early 17th century the wage system had generally replaced all other forms of labour.<sup>29</sup> To ensure a stable labour pool, some mine owners advanced loans, tools, shelter and food against wages, or paid wages in currency that could be redeemed only in the company store. Low wages kept workers in debt and limited their ability to leave the mines. Poor conditions and long working hours led to rebellions, but rising prices for silver enabled mine owners to increase wages. Indian and *mestizo* labourers were lured to mining regions by relatively high wages and other incentives.<sup>27,31</sup> Unlike in Peru, where there was a dual system of free and forced labour,<sup>30</sup> in the silver mines of New Spain, workers had more privileges and freedoms.<sup>32</sup>

Alexander von Humboldt, the Prussian naturalist explorer, visited New Spain from 1803-1804, where he spent time at the Valenciana silver mine in Guanajuato, the most important mine in the Spanish empire at the time.<sup>33</sup> From his visit he considered:

*"The working of the mines has long been regarded as one of the principal causes of the depopulation of America. It will be difficult to call in question, that at the first epoch of the conquest, and even in the seventeenth century, many Indians perished from the excessive labour to which they were compelled in the mines. They perished without posterity, as thousands of African slaves annually perish in the West-Indian plantations from fatigue, defective nourishment, and want of sleep... In the*

*kingdom of New Spain, at least within the last thirty or forty years, the labour of the mines is free;..."*<sup>34</sup>

## 16TH CENTURY DEMOGRAPHIC COLLAPSE

The Indian population collapse in 16th century New Spain has been considered a demographic catastrophe, with one of the highest death rates in history.<sup>35-37</sup> Less than a century after the Spanish Conquest in the search for gold, the population had dropped to just over one million people.<sup>12,23</sup> Estimates of the indigenous population of New Spain at the time of first contact with Spanish settlers vary greatly, from 3.2 million to 33.8 million.<sup>38</sup> Simms estimated that the population of New Spain declined from 27 650 000 in 1519 to 16 800 600 by 1532, 1 900 000 by 1580, 1 375 000 by 1595 and 1 075 000 by 1605.<sup>23</sup> The declines were the result of wars, slave trafficking, mistreatment, starvation, low birth rates, mass suicides, European diseases, and slave work. Poor diet, living and working conditions, and overwork, left the Indians particularly vulnerable to epidemics and occupational disease. European diseases, such as smallpox, measles, yellow fever and malaria, which had never been encountered by the indigenous population, resulted in millions of deaths. The typhus epidemic of 1576-1577 was reported to have claimed the lives of 2 000 mine workers.<sup>39</sup> The confiscation of labour, brought about by the Conquest, caused social and economic dislocation, which often led to reduced agricultural production and famine.<sup>38</sup>

## AFRICAN SLAVES

Racialist ideology allowed the Spaniards to erect colonial New Spain according to race, with a clearly defined social structure of three distinct groups: "A *White Spanish elite minority exercising economic, social, civil, legal and political domination, a large vanquished indigenous population and a mass of enslaved Blacks that remained at the lowest rungs of the social hierarchy.*"<sup>23</sup> Enslaved servants and free Africans arrived in New Spain in 1518-1519 with Cortés and his conquistadors, and over the next three centuries, some 200 000 African slaves were brought to the colony. Many were born into slavery in New Spain.<sup>40</sup> During the 16th century most of the African slaves came from the Guinea Coast and in the 17th century from Angola, with some reimported from Barbados.<sup>41</sup> Figure 3 is a lithograph showing Africans starting their journey into slavery from the African interior. The captured men, women and children are in shackles, herded by men with whips and guns towards the coast for sale into slavery.

In New Spain, African slaves were forced to work in slave gangs for mining expeditions,<sup>15</sup> at placer gold mines, at silver mines in the northern and central regions, on sugar plantations, in textile factories, on cattle ranches, at the ports, and in households.<sup>40</sup> According to the license agreement (*asiento*) granted by the Spanish Crown for the Atlantic slave trade, enslaved Africans had to be between the ages of 18 and 25 years to enable maximum labour extraction.<sup>23</sup> While the average working-life of an African male was 15 years from



**Figure 3. Band of captives driven into slavery, lithograph (1880), Wellcome Library, London**

Source: Wikimedia Commons

the time of arrival in New Spain,<sup>23</sup> that of slaves assigned to the mines was much shorter.

After the discovery of the first silver veins, Viceroy Antonio de Mendoza requested that the authorities in Spain send Africans because *“the silver mines are increasing, as each day more and more are discovered while the [Indian] slaves continue to decrease.”* A sympathetic Crown responded favourably, but the supply of Africans could not keep abreast of the demand in the mines and other economic enterprises. The high death rates of African and Indian slaves in the silver mines due to accidents (such as cave-ins) and lung disease fuelled the labour problem.<sup>42</sup> In a 1563 petition to the Crown, the *cabildo* (administrative council) complained of *“the many slaves that have died and die daily”* while extracting silver ore.<sup>27</sup> African slaves and those given life sentences worked in the most dangerous job – breaking ore out of the mine face.<sup>43</sup> Unemployed free blacks and *mulattoes* (offspring of Spanish and African unions) were, by law, also sent to work in the mines; criminals condemned to hard labour were employed in the same manner.<sup>2</sup>

At Zacatecas silver mines, African slaves were considered of little use underground, because they succumbed to the cold and humidity at the altitude of some 2 400 m.<sup>27,44</sup> As mine work was dangerous and African slaves were an expensive investment, mine owners became wary about employing

them underground, particularly as Indians could be captured during rebellions. Some African and Afro-descended slaves did excavation work, but the majority worked in the refining process.<sup>27</sup>

Abuse was part of daily life; resisting oppression often meant torture, mutilation, whipping or confinement.<sup>40,43</sup> African slaves, and those of African descent, toiled at the mines of New Spain for some three centuries. During the second half of the 16th century, the known placer gold mines disappeared rapidly. In the mid-1550s, silver mine owners convinced the *Council of the Indies* that deep shaft mining was best done using Indian labour on a moderate scale with appropriate payment. Consequently, Africans were never used on a large scale in mining after the shift from placer gold mining to deep mines for silver production.<sup>45</sup> In 1569, Taxco mines employed 800 African slaves<sup>46</sup> and, by 1766, Real del Monte mines had only 133 black slaves, a much larger number than the average for the mines of New Spain.<sup>47</sup>

## EMANCIPATION

By 1793, there were fewer than 6 000 black slaves in the whole of New Spain and not more than nine or 10 thousand slaves, of which the greatest number belonged to the ports of Acapulco and Veracruz.<sup>34</sup> By the time of the visit of Humboldt in 1803, there were few slaves in New Spain, as the government wished to see the number of freemen increased<sup>34</sup> and the anti-slavery movement had gained strength.<sup>48</sup> By law, a slave who had been cruelly treated could acquire his freedom through the courts, and a slave who had procured a little money could compel his master to give him his liberty for a moderate sum.<sup>34</sup> The slave trade in New Spain was abolished in 1817.<sup>23</sup>

Under the Spanish, New Spain had a complex legal racial caste system, with three main categories, viz. Europeans, Indians and Africans. These were divided into 16 racial sub-categories which determined how high in society one could go. Paintings were commissioned to illustrate the 16 official racial mixtures.<sup>49,50</sup>

Mexico became independent in 1821 and the new government outlawed the caste system in 1822. Slavery was abolished in 1829 (at least on paper), apart from in Texas.<sup>23</sup> However, with the hostilities between Mexicans and Indians of Sonora and Chihuahua, captured Indians were again condemned to work in mining, chiefly in the dressing of silver ore in the open air (breaking up the ore with hammers).<sup>51</sup>

This paper on New Spain will be continued, to explore working conditions at the gold and silver mines.

## REFERENCES

1. Simpson LB. The encomienda in New Spain. The beginning of Spanish Mexico. Berkeley: University of California Press; 1966. p. 69, 189, 214-229.
2. Commentaries on the mining ordinances of Spain by Don Francisco Xavier de Gamboa. Translated from the original Spanish by R Heathfield. Vol. II. London: Longman & Co.; 1830. p. 101, 276-280.

3. Stanton DW. Occupational health litigation and the development of occupational hygiene: Slavery - Part 1: From ancient times. *Occup Health Southern Afr*. 2017; 23(2):18-22.
4. Stanton DW. Occupational health litigation and the development of occupational hygiene: Slavery - Part 2A: Gold and the North Atlantic Slave Trade (West Africa and Hispaniola). *Occup Health Southern Afr*. 2017; 23(3):21-28.
5. BBC. A history of the world: episode 80 – Pieces of eight. Available from: <http://www.bbc.co.uk/ahistoryoftheworld/about/transcripts/episode80/> (accessed 3 Nov 2017).
6. Malmstrom VH. Land of the fifth sun: Mexico in space and time. Hanover, New Hampshire; 2002. An e-Book in historical geography. Available from: [http://www.dartmouth.edu/~izapa/LFS\\_Title%20Page.htm](http://www.dartmouth.edu/~izapa/LFS_Title%20Page.htm) (accessed 3 Nov 2017).
7. Excerpts from Hernando Cortes's second letter to Emperor Charles V, 1520. Available from: <http://www.umsl.edu/~hurleya/Cortes.htm> (accessed 3 Nov 2017).
8. Lewis G. Silver. In: Stacy L, editor. *Mexico and the United States*. Vol. 3. New York: Marshall Cavendish; 2003. p. 755, 756.
9. A glimpse of Inca treasure: 1527-1532. *History of Latin America*. History World. Available from: <http://www.historyworld.net/wrldhis/PlainTextHistories.asp?ParagraphID=heh> (accessed 3 Nov 2017).
10. Mining history of Mexico. First Majestic Silver Corp. Available from: <http://www.firstmajestic.com/en/social-responsibility/mining-history-of-mexico> (accessed 3 Nov 2017).
11. Richards JF. *The unending frontier. An environmental history of the early modern world*. Berkeley and Los Angeles: University of California Press; 2005. p. 366, 370.
12. Waszkis H. *Mining in the Americas: stories and history*. Cambridge: Woodhead Publishing Limited; 1993. p. 31, 33, 36.
13. Reséndez A. *The other slavery: the uncovered story of Indian enslavement in America*. New York: Houghton Mifflin Harcourt; 2016. p. 72-74, 81.
14. Gerhard P. A black conquistador in Mexico. *Hispanic Am Hist Rev*. 1978; 58(3):451-459.
15. Restall M. Black conquistadors: armed Africans in early Spanish America. *Americas*. 2000; 57(2):171-205.
16. Bakewell P. Mining in colonial Spanish America. In: *The Cambridge history of Latin America. Volume II Colonial Latin America*. Editor L Bethell. Cambridge: Cambridge University Press; 1997. p. 105-152.
17. Robertson W. *The history of America*. Vol. IV. London: printed for J Richardson & Co.; 1822. p. 4.
18. Sullivan MA. Mural: the arrival of Cortés, Palacio Nacional de Mexico. Ohio: Bluffton University; 2010. Available from: <https://www.bluffton.edu/homepages/facstaff/sullivanm/mexico/mexicocity/rivera/cortez.html> (accessed 3 Nov 2017).
19. California's legal heritage. Robbins Collection Center, University of California; undated. Available from: <https://www.law.berkeley.edu/library/robbins/pdf/ca-legalheritage.pdf> (accessed 3 Nov 2017).
20. Stacy K. Las Casas, man who made a difference. The Historical Text Archive; undated. Available from: <http://historicaltextarchive.com/sections.php?action=read&artid=444> (accessed 3 Nov 2017).
21. Pruitt A. Bartolome de Las Casas: protector of the Indians; undated. Available from: <http://amplascasas.weebly.com/index.html> (accessed 3 Nov 2017).
22. Helps A. The Spanish conquest in America, and its relation to the history of slavery and to the government of colonies. Vol. IV. London: John Lane; 1904. p. 100-108, 254, 255.
23. Simms EY. Miscegenation and racism: Afro-Mexicans in colonial New Spain. *J Pan Afr Stud*. 2008; 2(3): 228-254.
24. López de Cerrato, Alonso (c. 1490–1555). *Encyclopedia.com*. Available from: <http://www.encyclopedia.com/humanities/encyclopedias-almanacs-transcripts-and-maps/lopez-de-cerrato-alonso-c-1490-1555> (accessed 3 Nov 2017).
25. Sherman WL. *Forced native labor in sixteenth-century Central America*. Lincoln: University of Nebraska; 1979.
26. Toth AL. *Missionary practices and Spanish steel: the evolution of apostolic mission in the context of New Spain conquests*. Bloomington: iUniverse, Inc., 2012. p. 142-145.
27. Murillo DV. *Urban Indians in a silver city, Zacatecas, Mexico, 1546-1810*. Stanford: Stanford University Press; 2016. p. 35-44.
28. Barber RK. Indian labor in the Spanish colonies. *New Mexico Historical Review*. 1932; 7(2):105-142.
29. Kirkwood JB. *The history of Mexico*. Santa Barbara: Greenwood Press; 2010. p. 60, 61.
30. Garner RL. Long-term silver mining trends in Spanish America: a comparative analysis of Peru and Mexico. *Am Hist Rev*. 1988; 93(4):898-935.
31. Keen B, Haynes K. *A history of Latin America, Volume 1. Ancient America to 1910*. Boston: Houghton Mifflin Harcourt Publishing Company; 2009. p. 81.
32. Silver in the Americas. *Epic World History*; undated. Available from: <http://epicworldhistory.blogspot.co.za/2012/05/silver-in-americas.html> (accessed 3 Nov 2017).
33. Alexander von Humboldt. Wikipedia. Available from: [https://en.wikipedia.org/wiki/Alexander\\_von\\_Humboldt](https://en.wikipedia.org/wiki/Alexander_von_Humboldt) (accessed 3 Nov 2017).
34. Von Humboldt A. *Political essay on the kingdom of New Spain. With physical sections and maps*. Translated from the original French by John Black. Vol. I. 2nd edition. London: Longman & Co.; 1814. p. 123, 124, 236, 241, 242.
35. Acuna-Soto R, Stahle DW, Cleaveland MK, Therrell MD. Megadrought and megadeath in 16th century Mexico. *Emerg Infect Dis*. 2002; 8(4):360-362.
36. History of Mexico. *history.com*. Available from: <http://www.history.com/topics/mexico/history-of-mexico> (accessed 3 Nov 2017).
37. The Spanish and Portuguese empires. *PortCities Bristol*. Available from: <http://www.discoveringbristol.org.uk/slavery/routes/places-involved/south-america/spanish-Portuguese-empires/> (accessed 3 Nov 2017).
38. Livi-Bacci M. The depopulation of Hispanic America after the conquest. *Popul Dev Rev*. 2006; 32(2):199-232.
39. Murillo DV. *Urban Indians in a silver city, Zacatecas, Mexico, 1546-1806*. Los Angeles: University of California; 2009.
40. Palmer CA. *Africa's legacy in Mexico: a legacy of slavery*. Smithsonian Center for Education and Museum Studies; undated. Available from: <http://www.smithsonianeducation.org/migrations/legacy/almleg.html> (accessed 3 Nov 2017).
41. West RC. *The mining community in northern New Spain: the Parral mining district*. Berkeley: University of California Press; 1949. p. 119.
42. Palmer CA. The first passage 1502-1619. In: Kelley RDG, Lewis E, editors. *To make our world anew: Vol. 1: A history of African Americans to 1880*. New York: Oxford University Press, Inc.; 2000. p. 19.
43. Jennings G. *Aztec blood*. New York: Forge Books; 2002. p. 564-572.
44. Bakewell PJ. *Silver mining and society in colonial Mexico, Zacatecas 1546-1700*. Cambridge: Cambridge University Press; 1971. p. 124.
45. *Negro slavery in Latin America*. Rolando Mellafe translated by JWS Judge. Berkeley: University of California Press; 1975. p. 85-88.
46. Gonzales RM. *The African presence In New Spain, c. 1528-1700*. Prairie View A&M University. Available from: <http://www.pvamu.edu/tiphc/research-projects/afro-mexicans-afromestizos/the-african-presence-in-new-spain-c-1528-1700/> (accessed 3 Nov 2017).
47. Real del Monte 1766 strike. Wikipedia. Available from: [https://en.wikipedia.org/wiki/Real\\_del\\_Monte\\_1766\\_strike](https://en.wikipedia.org/wiki/Real_del_Monte_1766_strike) (accessed 3 Nov 2017).
48. Gudmestad RH. *New Spain and Mexico*. In: Finkelman P, editor-in-chief. *Encyclopedia of African American history, 1619-1895: from the colonial period to the age of Frederick Douglas*. Vol. 2. New York: Oxford University Press, Inc.; 2006. p. 442-444.
49. De Tal F. *The Mexican Caste System*. San Diego Reader 2011 Nov 4. Available from: [https://www.sandiegoreader.com/weblogs/fulano\\_de\\_tal/2011/nov/04/the-mexican-caste-system/#](https://www.sandiegoreader.com/weblogs/fulano_de_tal/2011/nov/04/the-mexican-caste-system/#) (accessed 3 Nov 2017).
50. Casta. Wikipedia. Available from: <https://en.wikipedia.org/wiki/Casta> (accessed 3 Nov 2017).
51. Simonin L. *Underground life; or, mines and miners*. Translated by Bristow HW. London: Chapman and Hall; 1869. p. 341, 470.