
MINING A SHARED HERITAGE: THE CORNISH AND THE LEAD MINES OF LINARES, SPAIN

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The Linares-La Carolina mining district is in the north of the Province of Jaén, in the region of Andalucía, and extends from Despeñaperros (in the Sierra Morena) to the south about 40 kilometres with a width east to west of about 30 kilometres. Its position inland means that its climate is more extreme than that on the coast, with cold winters and hot dry summers. It could appear to be an inhospitable land, but its underlying geology made it a place of great value and consequently various world powers have sought to exploit its mineral richness.

The history of a territory: waves of immigration

This has led to successive waves of immigration to the area, all of which have left their cultural mark. Four thousand years ago, in the Bronze Age, the Argárica Culture from the Spanish eastern Mediterranean coast systematically settled a big part of the district, attracted exclusively to do so by the mining and metallurgical exploitation of copper from abundant out-cropping lodes. Several large settlements were established in the vicinity of Bailén and Linares along the beds of the rivers that flow from the Sierra Morena.

Later, the Iberians continued to exploit the copper mines, but also began to work the abundant lead lodes too, as they possessed the necessary technology to make this possible. The town of Castula, close to the current city of Linares, was the capital of Oretania and its important mining district. The known mineral richness of the area provoked the interest of the Carthaginians and the Romans, who sought the cooperation of the Iberian people to exploit their mines. The intrepid Carthaginian General, Hannibal, even went as far as to take his wife, Himilce, the Oretanian King's daughter, to conclude highly desirable commercial and mining agreements.

The Romans extended their control over the area and established several mining works, near Linares (including Arrayanes and La Cruz), as well as in the Sierra Morena (El



Centenillo and Salas de Galiarda), where mining and metallurgical activity was very intensive and assumed great importance, characterised by their workings' defensive fortifications. The Romans applied cutting edge technology to the mines and evidence of well preserved Roman waterwheels and Archimedes screws were discovered at El Centenillo in 1911.

There are no references to mining during the period of Moorish domination and the Middle Ages, but registries dating from 1563 referred to mining concessions in the area, pointing to continued mineral exploitation. In 1749 the Spanish Crown took an interest in the district, choosing to work the Arrayanes Mine. Mining assumed a new and important impulse attracting many technicians and specialised workers from the Almaden Mines which had profound social consequences in the emergence of a new social order, particularly the rise of the new middle class.

Linares in the age of the Industrial Revolution

Migration to the Linares district was therefore well established before the onset of the Industrial Revolution, when the technology perfected on the mines of Cornwall made its appearance in the region. In 1843 the Linares mines were reported in the Cornish press to have been inspected by Captain J. MALACHY, a Cornish miner of experience, who was probably the same man that captained the Aroa Mines of Gran Colombia in the 1820s. In 1849 the first pumping engine was installed on the Pozo Ancho Mine, proving to be such a success that a great proportion of the area's mines were equipped with these Leviathans of the industrial world.

This had two enormously important consequences. Firstly, it was necessary to build masonry structures to accommodate the engines for pumping and winding which gave rise to a



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mining landscape redolent of Cornwall. The landscape was transformed by the construction of Cornish-style engine houses, chimneys and other industrial structures over a relatively concentrated area. Rivalling anything to be found in Cornwall, this remarkable landscape clearly demonstrates how man has constructed and exploited it, physically (in terms of natural and human occupancy) as well as socially and culturally.

Secondly, it was necessary to have specialists to install and maintain the massive engines and these were naturally recruited from Cornwall where the high pressure steam engine technology employed in the mining industry had been perfected. The British capitalisation and involvement in the Linares mines resulted in a wave of adventurers, builders,



masons, machinists, foremen, miners and businessmen from several parts of Britain, but mostly from Cornwall, who settled in Linares, recruited by companies such as John **TAYLOR** and Sons. In turn, large French, German, Belgian and Spanish companies also began operations in the district bringing great prosperity and stimulating a huge economic boom that transformed it.

By 1867 the mines of the Linares district were the main lead producers in the world. The city of Linares witnessed a spectacular population increase, rising in less than 30 years from a population of 7,000 to over 41,000 by the 1870s. A multitude of languages and accents could be heard in its narrow, crowded streets, from the regional languages and dialects of the Iberian Peninsula, to English, French and German. In 1875, the English Chaplain, Hugh James **ROSE**, provided a vivid description of this populous mining city:

“Here is a typical mining town. It is on the outskirts of the wild range of Sierra Morena. It stands on the gently declining slope of a hill; around it stretch plains of tawny sand, covered

in spring with green crops of barley, broad-beans, and coarse wheat, belted in with olive groves, their dusky, stunted trees enclosed in crumbling stone walls, each enclosure having a small, dark-roomed shanty, the “lodge” of the olive-guard, in its midst.

The town is old, as many a fragment of crumbling Roman or Morrish masonry will show. It was built originally for some eight thousand people, and now at least forty thousand people are packed within its walls, literally “like herrings in a barrel”.... The houses of the mining town are, at least a great proportion of them, of Spanish design, and consist of one-storied buildings made of the huge thick blocks of the granite in which the lead usually is found, with very small iron-caged windows without glass; others of modern and wholly different architecture have sprung up in a thick and growing crop all around and among them. The streets are not paved, as a rule, but have been pitched at some remote period....”

The Cornish in Linares

During the second half of the nineteenth century, as in other countries with an abundance of mineral wealth, mining agents (Captains as they were known), engineers, pitmen, dressers, smelters and other specialised workers from Cornwall gravitated to Linares. With their old spirit of enterprise, perseverance and mining skills they lived with the Spanish miners, with whom they shared the painful work conditions on the mines, suffering with them from a lack of good food, the scarcity of books and newspapers and the want of society. Cornishmen generally held the most skilled and responsible jobs on the mines, commanding Spanish workers and miners. Examples of Cornish Mine Captains included J. Lee **THOMAS** of the Las Infantas Mines 1854-1857; J. **VIVIAN**, Edmund **CHEGWIDDEN** and T. **FAULL**, Mine Captains with the New Linares Mining Association in 1853; James and Josiah **REMFREY**, Managers of the San Fernando Mines in 1854 and William **SPEAR**, Manager of the San Guillermo Mines before his death in 1888.



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The Cornish and the Spanish miners shared the same *sang-froid*, but on occasions the Cornish management encountered confrontations with the workers under their command, sometimes because of language difficulties which caused offence and at others times, as in Mexico, because of the difference in working practices and failure to empathise with the temperament of the Spaniards. But at the same time the Cornish miner was bronzed by the Andalucían sun, contact with the Spanish gave them a certain liberality of thought and opinion, as well as an appreciation of the Spanish sense of humour. 'I never thought a Catholic could be a good man', commented a stalwart pitman to H. ROSE 'until I came to Spain'.

Unlike in the nearby Spanish mining area of Rio Tinto, or in parts of Latin America where the Cornish miners tended to reside in purpose built colonies, in Linares they did not inhabit any specific area of the town, but lived in the mining neighbourhoods generally located on the outskirts of the city close to the access roads to the mines. The technicians and mine managers had their houses in the stateliest areas of the town, where the middle class of Linares resided, mainly at the old town centre and the urban development area. Some single men, such as Michael and Paul, two Cornish machinists who in 1873 were employed at the Arrayanes Mine, lived in a tiny one-storied shanty close to the engine house. And more extreme was the case of "Captain Jack, the Preacher", whose Methodist austerity took him to live in solitude in a little, isolated and desolate mine, located in a hidden spot.

Many of the Cornish miners left their families at home in Cornwall where they were permitted to visit them for three months every three years, according to the terms and conditions of their contracts. Others brought their families with them while some single men married Spanish girls, such as S. HANCOCK who married a Spanish woman named Dolores and James TONKIN, Director of the La Tortilla Foundry, whose wife's family name was JIMENEZ. If they could, they did so under the rites of the Protestant Church in the Cathedral of Gibraltar, and later repeated the ceremony after the rites of the Roman Catholic Church. If this was not done the girl could not be recognised as married in Spain, which had negative consequences for citizenship, the legitimisation of children and of probably for their economic standing also. A Protestant burial ground was opened for the use of non-Catholics and this contains numerous examples of headstones to those Cornish who made Linares their temporary or permanent home. Some names include BOSISTOW, DAVEY, GOLDSWORTHY, HANCOCK, KENDALL, KITTO, LANGDON, REMFRY, RODDA, SPEAR and TONKIN.

Some of the Cornish who migrated to Linares appear to have known each other in Cornwall, pointing to migration networks that linked specific places and even mines in Cornwall with this region of Spain. Mining engineer, James ROBERTS, was born at Garlidna, Wendron, in about 1820. In his early career he worked in the mines of his native parish, including Wheal Ann, Wheal Valls and Wheal Union. By 1850 he was a competent mining engineer, constructing a steam engine at Wheal Valls in his leisure time with Walter PASCOE, mine smith, who made the castings. In 1860 he was employed at Trevenen Mine under the management of Captain MEDLYN, leaving there for Prespidnick Mine, Sithney, which had recently commenced operations and was managed by Captain Richard KENDALL. In about 1862 his talents were noted by Messrs. TAYLOR and Co. who engaged him for La Fortuna Mines at Linares. Whilst here

he befriended Spanish nobleman, Señor FIGHEROA, who offered him a position at the lead mines of La Trinidad, near Madrid, when his contract with TAYLOR and Sons came to an end. He married a Spanish woman from Grenada, returning with his wife to Wendron in 1882 after the mines of La Trinidad became poor.

Captain Richard KENDALL, ROBERTS' boss at Prespidnick Mine, also migrated to Linares. In August 1866 he married Patience ROWE of Constantine. The year of their marriage was not an auspicious one, as the Cornish copper mining industry fell into crisis following the disastrous collapse of banking giants, Overend and Gurney, which sent economic shock waves throughout the region. Mine after mine closed and Prespidnick had ceased operations in 1864. It is highly likely

that his decision to migrate with his wife to Linares soon after their marriage was made because of his connection with James Roberts. The couple had a daughter, Annie, born in Linares the following year that died soon after. Patience died in 1870 and she and her daughter are interred in the Protestant Cemetery.

Some Cornish migrated from further afield, underlining the intra-European nature of mining migration networks. One such example is that of Captain James TONKIN who was born in 1848 at Skibereen in County Cork, Ireland, son of Cornish miner William TONKIN and his Irish wife, Margaret MORRIS. TONKIN arrived in Linares before 1881, becoming the Director of La Tortilla Foundry. He appears to have had a brother, Charles, who also worked at La Tortilla; upon his retirement in 1896 Charles' was the President and Director of the Buenaventura, Fortuna, Alamillos and Linares Lead Mining Companies.



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In common with many other parts of the world, the Cornish connection with Linares did not last well into the twentieth century. Cornish migration figures dropped rapidly during World War One and in the economically depressed years afterwards. The war resulted in severe disruption to migration chains and many Cornish miners either repatriated or were killed in action. These networks were not easily repaired in the post war years, especially since overseas British financed mining companies were not as numerous as once they had been. Cornish mine captains were fewer as a result and more native men were recruited in overseas metalliferous mining fields. Crucially, Cornish 'science' was seen to be outdated, its miners and engineers in their technical dotage. However, the legacy of the Cornish miners' time in Linares is indelibly stamped on the landscape, one of the most remarkable and quintessentially 'Cornish' of its kind anywhere in the world.



Mining our heritage: looking to the future

The last working lead mine in the Linares mining district closed in 1991. The same year the Arrayanes Project came into being, with the aim of protecting, conserving and interpreting the long and incredibly rich mining heritage of the region. In 1998 a non-profit voluntary organisation, the Colectivo Proyecto Arrayanes, was initiated to carry out the objectives of the Arrayanes Project. Working with local and regional authorities, the Colectivo have begun to catalogue the number of mine sites in the district – currently 134 – and to provide interpretation panels along a series of heritage

displays allowing visitors to fully appreciate how 4,000 years of mining has shaped the district economically, politically, socially, and culturally. The centrepiece will be a 12 metre square model of the mining landscape with which visitors will be able to interact by means of lasers that will activate screens displaying various elements of the district's rich heritage. This model will depict a series of walking routes inviting people to visit and explore the real museum.



More ambitious plans have been promulgated for the future, including a Metallurgical Interpretation Centre at the disused La Cruz Foundry and a Mining Interpretation Centre at La Tortilla Mines. The long term aim of the Colectivo is to get the Linares Mining Landscape inscribed as a UNESCO World Heritage Site, as the Cornish Mining Landscape looks set to achieve in 2006. Echoing our shared mining past, once more the Cornish and Spanish are working closely together, this time to mine our shared heritage and to secure World Heritage Site Status. This will ensure that future generations will benefit from an understanding of how mining, mankind's oldest industry, has contributed to the development of society - socially, culturally, economically and technologically - since the dawn of human habitation in the Stone Age.

If you are thinking of visiting this remarkable part of Spain, or for more information about the Colectivo Proyecto Arrayanes, please visit their website at:

walks. Collaboration with the Universities of Jaén and Granada is driving a study of the history of mining in the region.

The *pièce de résistance* for the Colectivo will surely be the opening of a major new interpretation centre in Linares in the very near future. Located in a former warehouse at the old railway station, the centre will deploy state of the art

<http://www.proyectoarrayanes.org/index.php>

And if you have any information about your Cornish ancestors' connections with Linares, please contact the Colectivo or Dr Schwartz (S.Schwartz@ex.ac.uk) at the Institute of Cornish Studies.

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