

Fr. J.P. Armand David's journey across the Qinling Mountains to Hanzhong during his third Expedition to China in 1873.

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Abstract: Based on the diary from Fr. Armand David's 3rd expedition to China in 1873, this article describes events surrounding a journey made by the missionary and natural scientist Fr. Armand David who with 12 companions in February, 1873 travelled the route of the ancient Baoxie Road south across the Qinling Mountains. From the Wei River plain near Meixian they passed through present day places including Yinggezui, Lingdan Miao, Zuitou, Guji, Wangjialeng, Jiangkou, Nanhe, Ershili Pu and Baocheng to reach Hanzhong. Along the way he recounted his daily experiences and observations of the wildlife, flora, geography and geology. His journey complemented a journey across the Qinling made in the previous year by the Baron Ferdinand von Richthofen along the main Baoji to Hanzhong Road adding important scientific and access knowledge about these remote areas of China for western travellers. His journey also provides valuable information for historians today about this less travelled road in the Qing period.

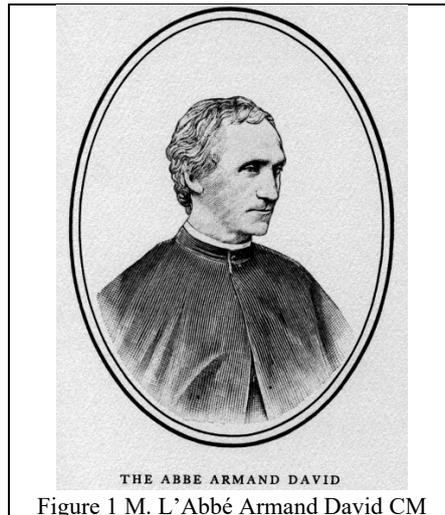
Key words: Fr. Armand David, Baoxie Road, off road survey, Qinling geography, Hanzhong

Fr. David and his field excursions in China

Monsieur L'Abbé Père Jean Pierre Armand David (CM, 1826-1900, Chinese name 譚卫道, Tan Weidao, Figure 1) was a French Natural Historian and Vincentian (a Catholic order, also called "Lazarist") missionary who made three major journeys into the interior of China. After an initial period of missionary work, based on his demonstrated achievements in science and field expeditions, his primary objective became to study and collect specimens of the wildlife, flora and fauna. He will be called here by Abbé Armand David using this general French term for a member of the clergy or more simply as Fr. David (Brother¹ David). In addition to natural science, Abbé Armand David was a keen geologist and palaeontologist and made an extensive study of the rocks and fossils at the places he visited.

During his first two expeditions to China (1866 and 1868-70), he was the first European to see and study many species, including the Giant Panda (called at that time in Sichuan the White Bear, 白熊, *Ailuropoda melanoleuca*) and has given his name to many present (western) biological names. Among these is a species of deer (the "Père David's Deer", *Elaphurus davidianus*) previously unknown to Europeans and at the time almost extinct in China except for a few that remained in the Imperial Hunting Park north of Beijing. Abbé Armand David and the French Embassy were able to organise for some of the deer to be taken to Europe and all presently remaining members of the species in China are apparently descended from these refugee deer.

¹Fr. is an abbreviation for Frater or Frère, Father is usually abbreviated as P. for Pater or Père.



Fr. David's third expedition in 1872-1873 (David, 1875) was also a journey of significance for the study of China's ancient "Shu"² Roads which linked north and south across the Qinling Mountains (秦岭山脉). Fr. David's main purpose was to investigate plants and wildlife in areas of the Qinling Mountains from bases in both the northern Wei River Valley and the southern Han River Valley. He initially worked in the Lao Valley (涝峪) entrance to the Qinling (not far from Xi'an) and also visited other valleys further west. However, with increasing danger from the Moslem Revolt in Gansu as well as China's response, and the activities of various other rebels in the west, he decided to go to the Hanzhong basin before travelling to Hankou in Hubei by boat on the Han River. Fr. David was aware that the Baron Ferdinand von Richthofen (Richthofen, 1872) had recently travelled through the Qinling using the Main Northern Road so he decided to take another route along what was, in ancient times, called the Baoye (褒斜道, or Baoxie) Road. The Baoye Road went from Meixian on the northern side of the Qinling across the divide to the Bao River Valley and then down the Bao River to join the Main Northern Road and reach the Hanzhong Basin. This document describes his journey. After investigating areas of the Hanzhong basin, he went by boat to Hankou in Hubei. Unfortunately, his boat was wrecked near present day Ankang and many specimens lost. Fortunately, Fr. David was unhurt and continued on into Hubei.

Fr. David left detailed diaries of his travels and lists of his observations and specimens. For English speakers, the main source of information has been the translation of his travels during his first two voyages in China by Helen M. Fox (Fox, 1949). Helen Fox's translations are the basis for many descriptions and accounts of the travels of Fr. David in English such as the derivative book by Bishop (1995). Helen Fox notes that her translation is abridged and leaves out material she did not believe to be relevant to her main aim. Her aim, she wrote, was not to focus on the collections of wildlife and natural history but rather "... with a view to emphasising the outstanding features of the journals – that is, the descriptions of daily life in China, and the delightful personality of the author as revealed in the text". Unfortunately, after reading the accounts of the three voyages, Helen Fox did not think the third voyage was as interesting as the other two and so did not publish a translation. The material in this document is therefore based only on the French language publication:

² "Shu" was an ancient name for Sichuan. The roads across the Qinling to the south were called Shu Roads. For more information see <https://qinshuroads.org/>.

David, M. L'Abbé Père Armand (1875). *Journal de mon troisième voyage d'exploration dans L'Empire Chinois*. 2 volumes, Paris, Librairie Hachette et Cie.

One problem that must be faced when matching Fr. David's diaries with maps and geography is that he used a personal transliteration of Chinese names when one was not already in common use. At the time of his travels there was really no single standard way to express Chinese names in the Latin alphabet. A document by the present writer describing Alexander Wyllie's papers on the Shu Roads web site³ has an endnote on the difficulty of interpreting the various attempts to write Chinese names at the time and suggests some possible ways to try and match them with modern Pinyin. In the case of Fr. David's transliteration, the present writer has used an empirical method in which the names in Chinese characters for places that can be identified both in the text and on maps are established. The Pinyin components of the names are then identified with Fr. David's transliteration and the common matches are collected into a table. But there are always some names and parts of names that are ambiguous or continue to escape recognition. The problem is that Fr. David's transliterations are often phonetic rather than standard and are affected by his native language as well as his ear for Chinese. This is noted by Helen Fox (Fox, 1949) when she wrote that his phonetic names have a "French accent". This is hardly surprising, but it is helpful to keep it in mind when searching for places mentioned in the journal of the Third Voyage.

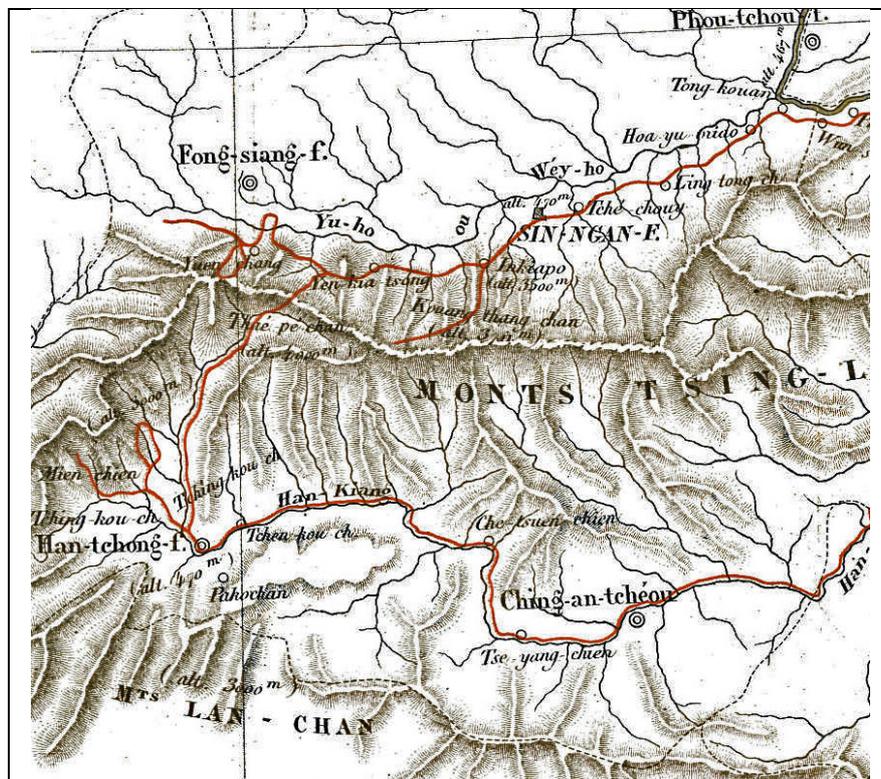
It is also significant that in the Third Voyage, Fr. David spent almost all of his time living among local Chinese Christians in villages off the main roads. Catholic Brothers had come to Shaanxi and the southern area of Hanzhong very early after the discovery of the Nestorian Stele in 1625. In 1635, the French Jesuit Fr. Étienne Faber (SJ, 1568-1659; Italian name Stefano Le Fevre, Chinese name Fang Dewang, 方德望) went south from Xi'an across the Qinling to Hanzhong where he spent the rest of his life. He built Churches and was famous for miracles that made his Tomb a site of worship for Christians and non-Christians alike until at least 1948⁴. Fr. David visited Fr. Faber's Tomb in 1873. It seems that when Fr. David visited China, Shaanxi and Hanzhong still had local Christian populations which could be traced back nearly 200 years to Fr. Faber. Fr. David was able to live with these Christians who gave him great support and protection as well as providing hunters to collect his specimens. However, as being Christian had sometimes been rather difficult during the previous 200 years, the communities were mostly located in small villages away from administrative towns. It follows that the names of these places are rather hard to locate today, even when Fr. David's transliteration has a reasonable interpretation in Pinyin or he gives a hint such as "... the village of the Wang family".

This document is a summary of the route followed during Fr. David's travels between his activities in the north and south Qinling and the Hanzhong basin. The text is based on a reading of his diary and the present author's attempts to identify the places he visited. For his journey across the Qinling from the Guanzhong plain to Hanzhong by the old road, Fr. David mostly recorded journey distances in Chinese Li and had with him an aneroid barometer and a thermometer with which he recorded altitudes. These recordings are very useful to identify his routes. His specific biological and geological discoveries, his excursions on the political events of the day and his philosophical and religious musings are of great interest but, in this document, they generally take second place to the geography of the routes he travelled and locations of places he visited and his interactions with Chinese during this time. The diary of

³ https://qinshuroads.org/Alexander_Wylie_s_Travels/Alexander_Wylie.htm

⁴ https://qinshuroads.org/docs/PDF/Catholic_Missionaries_on_the_Shu_Roads.pdf

the third Expedition (David, 1875) also has a map of his travels of which a part is included here to give some geographic background to the text. Unfortunately, the map is not very accurate as a map of China or as a map of Fr. David's travels. It is, however, useful as a general base map for the geographic context.



Journey to Hanzhong via an alternative route.⁵

15-16 February 1873. Resting at Yanjia Cun.

After his failed attempt to visit some new areas in Gansu, Fr. David finally decided to take the advice of the Catholic Vicar Apostolic of Shaanxi, Msgr. Chiais⁶ and go across the Qinling to Hanzhong. Fr. David wrote:

“Since I cannot find anything important to do on this side of the Tsing-ling and it is not possible to go to Kansou, I do not have any choice but to go south of this chain. As a result, I am busy looking for ways to make this trip as soon as possible before the coming spring rains make the roads more difficult.”

In his diary, he discussed his pending journey to Hanzhong. He noted that the main route by which people went to Hanzhong from Xi'an was via Pao-ky (Baoji, 宝鸡). He writes that it is 12 days march from Xi'an to Hanzhong by this main route, that the route is well maintained,

⁵ The description of this journey was originally extracted from another document but became of more interest as a stand-alone document. However, it sometimes still refers to apparently previous or separate activities.

⁶ Msgr. Ephysius Chiais (OFM, 1808-1884, Chinese name 高一志, Gao Yizhi) was the Vicar Apostolic of Shaanxi from 1848-1884. A “Vicar Apostolic” had the rank of a Bishop and used the title of Monsignor (abbrev. Msgr.).

is used constantly by many travellers and has infrastructure (for example) to obtain mules to transport goods, has places to water the mules and stay overnight, etc. The estimate of 12 days is consistent with the experience of others who made this trip and used the main road since the 17th Century.

However, he notes that previously, the Baron von Richthofen (Richthofen, 1872) went south across the Qinling by the main road through Baoji and that it would be better if he went another way that a westerner had not. The alternative route would be via the valley where Moujia Ping (牟家平) was located. Moujia Ping was nearby to his present location, was well known to him and from where many animal and bird specimens had already been gathered. The village of Moujia Ping is in the present day Shitou He (石头河) or Xie Yu (斜峪) valley not far from the City of Meixian (眉县). Its location is about 20 Chinese Li above the wall of today's large Shitou Dam at the valley entrance. The route Fr. David proposed to use was along the ancient road called the Baoye road (褒斜道). It was a main road in the Han Period but had since fallen into disrepair and had become a secondary road. Fr. David believed it would take one week to travel from Moujia Ping to Han-tchong-fou (Hanzhong Fu, 汉中府) via this alternative route.⁷

He was keen for the opportunity to travel off the main road but somewhat concerned that it would be difficult to arrange transport for his large collection. He wrote:

“But where could I find the mules or men necessary to carry our various objects, whose total weight now amounts to more than three hundred kilograms? For my servants and I, we can easily walk; and all the more easily will the interior of the mountains furnish me with occasions to make observations and even some discovery, and for that it is useful for my movements to depend only on my own will.”

To journey over the back roads, the opportunities for engaging horses or mules for transport were certainly fewer than on the main road and the suppliers would have been aware of the difficulty of using a back road relative to a main road. When his local agent P. Hoang (in pinyin possibly Huang) tried to arrange suitable horses for the journey, he found that the price was exorbitant. Fr. David therefore came to an agreement with the villagers of Yen-kia-tsoun (Yanjia Cun) that, for a better price, 10 strong men would act as porters for his baggage⁸ from Yanjia Cun to the Christian village 30 Li from Hanzhong called Ouang-kia-ouan (Wangjia Wan) where Fr. David was expected.

17 February 1873. Preparing to leave Yanjia Cun

Fr. David and the villagers prepared for his journey. He wrote:

“So we will leave tomorrow morning, and have taken all of today to finish our preparations and to store in ten large packs our beds, our clothes, our utensils, our collections and our provisions.”

⁷ A KML file showing the route believed to be that travelled and places visited by Fr. David has been prepared by the present writer and can be made available to interested readers.

⁸ The Baron von Richthofen quotes the standard price of a porter as being 4.5 to 6 cash per picul per Li. A Picul (or “shoulder-load”) is the weight a man can carry, usually estimated at 60-64kg for professional porters. One cash is apparently the same as Fr. David's sapèke or one copper coin of a string of 1000.

Since the collection by itself added about 30 kg per man without any beds, clothes, utensils or provisions, one hopes that the 10 strong men were paid a fare wage!

Fr. David then describes the journey in Chapter 15 of his Journal entitled “From 18 to 26 February 1873”. Being a journey that others may be interested in repeating, Fr. David records route distances between daily stages in Li as well as altitudes along the way using his barometer. Unfortunately, Fr. David seems a little lax when it comes to Geography. He does not seem to have used a prismatic compass so that accurate on-track route headings were rarely provided and he sometimes only records barometric pressure and at others only his estimated altitude. It would have been better if Fr. David had listed barometric pressure and air temperature as well as his estimated altitude at each point, as his estimates over-estimated higher altitudes. A separate document discusses his data and provides a best estimate to correct the readings using present day data. His estimates of distances in Li also seem to be somewhat “short” and his record does not include any references to places such as villages and towns or monuments etc passed during the day – only the beginning and end places of the stage. The present writer feels he may have left the navigation up to his servants and concentrated mostly on the animals, birds, geology and vegetation.

Stage 1: 18 February, 1873. They travel 80 Li from Yanjia Cun to Lintao Miao where the altitude was a little over 1300m.

As the journey started across the plain, Fr. David saw a large red wolf. He wrote:

“We have scarcely made a few miles along road across the undulating plain, when the frenzied barking of dogs and cries of alarm caught our attention towards a big red wolf who, surprised by the dawn away from his mountains, galloped across the fields in our direction; some dogs pursue him from a distance, but they stop when he turns his head towards them. Unfortunately, our rifles are only loaded with lead; Nevertheless, I want to teach this thief of little children not to approach men: my shot is well adjusted, and, although the broad foreheaded beast fled a hundred steps from me, he was astonished at to feel the No. 3 shot penetrate his fur.”

Fr. David says it was among the largest such beasts he had seen and goes on to describe how much damage and death – even of adult people, was due to wolves in parts of China.

They then entered the valley of the Shitou River and steadily climbed going south. At 1:00pm they arrived at the village of Inkotzouy (Yingge Zui, 鸚鵡嘴) for lunch. Yingge Zui is present day Yingge Zhen, (鸚鵡鎮). He says that Yingge Zui is on the road at the base of the valley below Moujia Ping. They had gone 50 Li from Yanjia Cun and the altitude was 840 metres.

They had lunch with their hunter friends from Moujia Ping. Life as a hunter was not easy. Fr. David reported:

“During dinner, the Christians of the neighbourhood offered me tea and rice wine. They told me that recently four panthers had appeared in their district. The Chinese killed one and wounded another; but three of the hunters were badly injured by the beasts’ terrible claws.”

They then resumed the journey after lunch and continued on to the south. After a while they passed a temple (pagoda) in clump of trees called Kouang-chan-miao (Guangshan Miao, 光

山庙) at an altitude of 1308 metres. Fr. David notes that from the entrance to the mountains up to this point they had been heading due south but after this place they were starting to head south-west.

Fr. David writes of this place:

“To the south of the Kouang-chan-miao, I found some beautiful fastigate poplars, and the most elegant weeping willows we have seen, with the branches hanging long and slender, like strings.”

They passed the first night at the village of Ling-tao-miao (Lingtao Miao, 灵桃庙?). A place with this name has been located as a transliteration on a 1960/70s Russian Topographic Map. It is in the present day Taochuan (桃川) area where close by can be found a village called Lingdan Miao (灵丹庙). This could also be the place where they stayed. The altitude was a little over 1300 metres and they had travelled a long 80 Li (adding 30 Li since Yingge Zhen where they had a long lunch) to get here. Fr. David reported on the prevailing mood of the group:

“We had travelled eighty Li, and it was only at night that we found a place to live. So ended, happily and cheerfully, our first day of crossing the Tsing-ling, although, in a moment of discouragement, one of the porters threatened to leave us and another rolled with his load but with less harm than danger.”

Stage 2: 19 February 1873. They travel 60 Li from Lintao Miao to Zuitou where the barometer read 609mm.

They continued along the same stream filled with rocks (the Shitou River) until noon. Then about an hour later they climbed a hill at the top of which was a temple in a clump of trees. Fr. David records that the barometer read 605mm which he interprets as a height of about 1900m.

The rise in their climb was about 600m which suggests strongly that this climb is at what today is called the Wuli Po (5 Li slope, 五里坡). Fr. David mused as to the valuable role played by the inevitable temples to be found at the top of steep climbs in China:

“Without these pagodas, travellers would find no shelter against sudden bad weather, which is more frequent in high places than elsewhere. These small pagodas, poorer than those of the plain, are nevertheless inhabited by bonzes who live either from the cultivation of a piece of land, or by quests to the neighbouring hamlets. Private donations are always used for the construction of sacred buildings. We can say, therefore, that the religious feeling is no more wanting to Chinese than to the other peoples of the earth.”

Although Fr. David is more interested in the temple than the terrain, the Wuli Po is a very significant topographical point on their journey. The spine of the Qinling above the Guanzhong Plain is a main water divide so that to the north side of the divide the streams flow generally north into the Wei River and from there into the Yellow River. That is, the Qinling divide is the catchment boundary for the Yellow River. The south side of the divide is in the watershed of the Yangtze River. Between Xi'an and Baoji the rivers on the south side of the divide generally run overall south to enter the Han River. At the divide near Baoji

there is a triple divide where some water on the south side flows into the Han River catchment and some into the Jialing River catchment. The Han and Jialing are tributaries of the Yangtze River. The Han enters the Yangtze at Hankou (modern day Wuhan) and the Jialing reaches the Yangtze at Chongqing.

At the top of the Wuli Po Fr. David and his companions were crossing the Qinling Divide but this time without the dramatic winds and snow he experienced in the upper Lao River (滂河) catchment where he had recently hunted for specimens on the north side of the Qinling. They had also reached the source area of a river called the Bao Shui (褒水) or Black Dragon River (黑龙水) which he would follow almost all the way to Hanzhong. He writes:

“After this hill, the waters flow towards the south, we continued to advance in a westerly direction, descending a high, slightly inclined and well-cultivated valley.”

Fr. David’s diary gave a careful description of the geology and the main forest species along the route. Once the route is firmly established on a modern map, these observations can be collated as geographically located information still of interest to scientists. As they continued, Fr. David records that the snow covered Thae-péy-chan (Taibai Shan, 太白山) was to their left but that its apparent height decreased as they advanced. Later he observes:

“In the evening, towards the setting sun, we observed the rounded summit of a great mountain which dominated thousands of other peaks, and which seemed to me as high as the Thae-pey-chan; it belongs, no doubt, to Kansu.”

Finally, after a journey of 60 Li from Lintao Miao, Fr. David and his porters spent the night at the large village of Tzouy-thou (Zuitou, 嘴头) where the barometer read 609mm. At this place, he notes that another road joined their route that went to Kouy-chién (Guo Zhen, 虢镇) which was 120 Li away on the Guanzhong plain near Baoji. This was a well-established road at the time and is still a well-used road today. A short way along that road is a village called Jutou Jie (咀頭街, 咀头街), or present day Jutou Zhen (咀头镇). However, the place Fr. David stayed seems certainly to have been called Zuitou. The present administrative centre of Taibai Xian was only founded in recent times.

Stage 3: 20 February 1873: They travel 70 Li from Zuitou to to Guji Jie where the barometer read 624mm.

They left at first light and travelled along a valley in very cold weather such that the stream they followed was in places frozen. The initial direction was to the west and the destination was a small village called Kouy-ky-kié (Guji Jie, 古迹街) that Fr. David says was buried among the mountains and where they were to stay the night.

Later, the valley narrowed and the travel direction turned to the south-west. The stream was running faster as the slope steepened and the water became very clear. The condition of the road was becoming quite bad. Fr. David reports:

“We learnt that we still have four hundred li of road to go before we reach our goal! (ie Hanzhong) We walk slowly and every day we are on foot from morning till night. The roads here are often very bad, and I do not understand how I was told that they were passable by mules!”

At Guji Jie (which means “old historical site”), they had a supper of potatoes boiled in pure mountain water which Fr. David says were excellent. The journey distance was 70 Li and his barometer read 624mm. However, he does not mention any historical relics.

Stage 4: 21 February 1873. Journey of 60 Li from Guji Jie to Ma-kia-lang (Wangjia Leng) at an altitude of 1400m.

They continued to travel downstream along the side of the (now) rapidly flowing river. Fr. David reports that the two sides of the river were constrained between very steep, tree covered slopes. Fr. David observed variations in the substrata:

*“I distinguished birches with white bark, which seemed to differ from the *Betulus rocea* of the Lao-ling.”*

He also observed the geology, some interesting butterflies and small birds. Otherwise the days must have been becoming very tiring. After 60 Li they arrived in Ma-kia-lang. Judging by the distances travelled this could be a place now known as Wangjia Leng (王家楞). Wangjia Leng has some historical relics of the old road. Fr. David notes that the Altitude here is 1400 metres but does not notice any relics. For the present writer, the identity of this place is the least certain of the places along the way,

Stage 5: 22 February 1873. They travel just over 60 Li from Majia Leng to 12 Li below Jiangkou with barometer reading 669mm.

They initially continued to travel downstream though mountains very similar to the previous days but sometimes the valleys became so narrow, and the river so constricted that there was no way through and the roads had to pass over on the tops of the cliffs. This style of road, having a high road and a low road, is typical of the old Plank Roads of ancient times.

Then the vegetation started to change and the surrounds became warmer. Fr. David notes:

*“From now on, the stream has turned into a small river, and the valley is hotter. One proof of this is that we are starting to find house palms (*Chamoerops excelsa*), along with other southern trees. The *Corchorus japonicus* is common on the edges of the paths, and the *Forsythia suspensá* has also spread there, its yellow and odourless flowers resembling those of jasmine. The *Quercus ilicioides* [*Quercus spinosa*] is very common on the steep slopes, and in these parts it retains its green leaves in winter; it is only because of the cold that this tree, which here attains great proportions, is restricted in the northern part of the chain.”*

This is a significant environmental change.

After going a little more than 60 Li, they halted for the night at 12 Li below the large town of Kiang-kho (Jiangkou, 江口). Fr. David’s barometer read 669 mm. At Jiangkou, the small river they have been following (the Bao River, 褒河) is joined by another. Fr. David writes:

“At Kiang-kho, our river meets with another of the same strength which comes from the east, from the southern slopes of Thaé-péy: in this place its name is the Thae-Pey-ho (Taibai He, 太白河, Taibai River).”

Since ancient times, Jiangkou has been a major trading town through which almost every route between the mountains and the main road and large towns must pass. It had a garrison in the Qing period as well as an earth wall but Fr. David does not mention them.

Stage 6: 23 February 1873. They travel 78 Li to reach the small village of Lan-ho (Nan He) where then barometer reads 678mm or an altitude of a little less than 1000m.

As they start out, Fr. David notes that “*today’s journey passed like those that preceded it*” but he notes that they are now finding more people on the road. He also reported an amusing “discovery” made by his porters:

“There are some more distractions for my good luggage carriers. How happy these men are! Nothing is enough to cheer them up. This morning, a great burst of laughter was excited among these simple people by meeting with a herd of cows whose masters had put straw shoes on their legs to prevent them losing too much hoof on the stones. This was new and paradoxical for the peaceful inhabitants of the plain; but I have seen, in many other hilly regions of China, that feet are protected not only for large ruminants, but also for goats and especially travelling pigs.”

Fr. David also finds that there are some significant geological changes in this area:

“The steep mountains crossed before have sometimes shown us massive granites, sometimes schistose granites or gneisses, and sometimes laminated limestones, at times in immense thicknesses. Today, the mountains look the same, although they are a bit smaller and still well stocked with trees. The rocks are first of all gneiss; then an immense layer of coarse saccharoid marble is interposed between two beds of gneiss. Further away are limestone phyllites and talcose schists. Iron abounds in these schists, a few kilometers before arriving at Lan-ho; the ferric pyrites decompose spontaneously, and the rock lets the sulfuric acid ooze as a liquid slime with yellow efflorescence, whose odour is perceived from a distance.”

During this stage, Fr. David makes no references to settlements along the way, nor to changes in terrain, nor to the presence or absence of a stream or river beside the road at the different times. The destination village called Nanhe Jie (南河街) or “South River village” is located where a small river of the same name joins the main stream very near to the main road to Hanzhong. It is most likely that Fr. David followed the main stream along which had been the old road used since Han times. A problem is that at this time the road may have been in poor condition and only possible to use if, like Fr. David’s group, the journey was by foot. There was an alternative route of similar length which crossed through a high pass between catchments to come to Nanhe along another small river with the same name. But it seems more likely that they took a footpath along the main path of the river. Fr. David’s initial statement that “*today’s journey passed like those that preceded it*” and the mention of the decomposing ferrites above are both consistent with this.

Overall, the journey from Moujia Ping to Nanhe was very hard and it seems fortunate that Fr. David and his porters made the journey by foot. It is hard to see how Fr. David could have been so ill-informed that he was surprised at how bad the road was and that it was not (as he originally thought) suitable for mules or horses. The difficulty of this path certainly seems to have been known to the Baron von Richthofen who, after describing his travel on the main road between Baoji and Baocheng, in his English language “Letters” (von Richthofen, 1872) wrote:

“There are other trails crossing the Tsing-ling-shan, both west and east of this highroad. One of them, which shortens the distance between Si-ngan-fu and Han-chung-fu by four days⁹, is used by coolies carrying freight, but is said to be impassable in winter.”

Fr. David had come across this alternative trail after the winter snows and before the summer rains and had porters carrying the freight on foot. He was very lucky in his choices of season and transport and lucky to reach the main road without major accident or hold up.

Stage 7: 24 February 1873. They travel 80 Li to the township of Eul-che-li-pou (Er’shili Pu) where Fr. David’s barometer reads 696 mm.

From Nan He to the main road was a very short journey and the party then started to travel the main road which was well maintained and very busy. Fr. David wrote:

“We continue to descend; but the road is better now and wider, because from the morning early we joined the one coming from Pao-ky. From the junction of the two roads to Han-tchong-fu, there are no more than two hundred Li.”

The road being much better meant faster travelling and the stage road distance could be greater, such as the 80 Li for this Stage. Fr. David provides descriptions of the geology and the birdlife but not much of the geography. In preparation for the important geology of the exit to the Hanzhong Plain we will quote his summary of the geology:

“The mountains become rounded and less angular: they are still granitic for the most part; but often also there is metamorphic white limestone. I see masses enclosed in the midst of quartz and granite rocks. It is limestone with large rhombohedral crystals, containing white mica. Sometimes, too, huge blocks of pure quartz clog up the river, which is now very big.”

They spent the night at Er’shi Li Pu (二十里铺) which was a well-established rest stop on the main northern road.

Stage 8: 25 February 1873. They travel 75 Li to the walled city of Pao-tché-chién (Baocheng Xian, 褒城县) at the end of the mountains. Barometer indicated an altitude of 600m.

From the tone of his diary, it is clear that Fr. David is now very relieved that this is the eighth day of their journey and that they are finally leaving the mountain tracks to once again find the open sky.

They continued down the large river (Baoshui, 褒水). Near to where the river leaves the mountains, when Fr. David went to observe some birds, they came across a Temple in a gully that had been built on the roots of a tree. The root had the form of a Dragon’s head. It was known by travellers as the Mou-long-chou (Mu-long-shu or 母龙树) or “tree of the female dragon” and was regularly visited by passers-by.

⁹ The Baron von Richthofen estimated to time to travel the route Fr. David took to be 8 days, which was accurate and just one more day than Fr. David originally estimated.

They then arrived at the Shimen (the Stone Gate, 石门) and climbed the mountain (Qipan Pass, 七盘关) behind it. There were several temples at the top. The altitude was more than 900m at the top of what Fr. David called the “mont au Pagodes” in French and Miao-chan (Miao Shan, 庙山) in Chinese. Fr. David notes that the geology of the mountain is blue marble with white veins – evidence of the massive tectonic forces that created this section of the Qinling.

Of the climb to the “Miao Shan” Fr. David wrote:

“Immediately before it flows into the valley of the Han River, the river [Bao or Heilong River] is squeezed between the mountains so much that there is no room at its edge for a path; so the route must pass over the mountains. Starting at 2 pm, we climbed the last hill using a winding paved road. At the top of the mountain there were several beautiful pagodas, in whose surrounds were numerous stone votive offerings [Stele]. At the highest point of our way, my barometer fell to six hundred and eighty-six millimetres indicating an altitude of some nine hundred meters¹⁰ at the top of the “Miao Shan”, or Pagoda Mountain.”

Then like many other travellers since ancient times, they rested and viewed the Han River Valley. However, Fr. David had the eye of a scientist:

“From this height, where we stopped to buy some warm fermented rice water from the vendors, we can see for the first time the plain of Han-tchong-fou, already green with wheat and peas. Their fresh spring colour is enhanced by the red background of ferruginous soil. In fact, the mountains where we have travelled for several days are so rich in iron oxide that the earth and the rocks are all red, and the alluvium of the plain which comes from them also contains this material in abundance.”

He continues:

“All those who travel for a long time among the great mountains will have noticed the feeling of relief that one feels when one finds oneself in open country, whatever motive they might have had to push through rocky gorges. Despite the multiplicity of my travels, I have never ceased to feel this feeling of well-being whenever I find myself in such circumstances. So true is it that man is made to live in front of heaven! We need the immensity of the celestial vault, the expanse of a vast horizon connected with human intelligence, to embrace and understand everything, even the infinite ...”

After all this reverie, Fr. David comes back to earth and finishes:

“I see that my twelve porters and servants feel just as happy to have finally finished with the narrow ravines as I. But I suppose that in their minds, the aesthetic emotion or philosophical feeling has less play than the thought of soon finishing their labours. On our arrival at Pao-tché, where we will spend the night, I make these brave people, whom I treat as my brethren and not as mercenaries, even more cheerful by distributing among them three thousand five

¹⁰ The site of the pass is at about 810m altitude ASL using the present author’s pressure assisted GPS. Abbé Armand David’s heights seem to have had a consistent offset due to baseline pressure/height settings or not accounting for a temperature lapse rate. An effort has been made to correct his heights and is considered elsewhere.

hundred sapèkes as gifts¹¹. We are now forty li from Han-tchong-fou, and sixty li from Ouang-kia-ouan, the Christian hamlet where I will go to drop off my luggage.”

Altogether, on this final stage, they had travelled 75 Li to pass the night at Pao-tché-n-chién (Baocheng Xian) where the altitude was 600m. They passed the night in a hotel by the old city wall. Fr. David found out the following day that some foreigners (the Baron von Richthofen and Company) had stayed here the year before. Richthofen and his party had then gone on to Sichuan, but had not gone in to Hanzhong.

Fr. David said that the place where they stayed in Baocheng was about 40 Li from Han-tchong-fou (Hanzhong Fu) and 60 Li from the destination Christian village of Ouang-kia-ouan (Wangjia Wan). A village called Wangjia Wan (王家湾) can be found as a name on Google Earth and also as a named group of houses in a Russian 1960/70 Topographic Map. Google Earth is not very accurate at village level and the Russian maps are not always reliable. However, the place they identified as Wangjia Wan is 22 km from Baocheng and Hanzhong is 15km from Baocheng on modern maps. This, using an estimate for the “short” Chinese Li Fr. David was using of 400m, is consistent with Fr. David’s estimates.

For Fr. David and his porters, at Baocheng on the morning of 26 February 1873, it was the end of their voyage across the Qinling and the beginning of Fr. David’s adventures on the Han River’s sedimentary plain and the southern slopes of the Qinling Mountain range.

Afterword

Fr. David’s stay on the Han River Plain was a little over 6 weeks and shorter than he planned. His prime contact was P. Vidi¹², an Italian Franciscan priest who was active in this region at the time. P. Vidi shared Fr. David’s interests in natural history and fossils, which suddenly started to appear, even in rocks that had none in the Qinling. This the stay somewhat easier and more interesting. Fr. David made several expeditions into the high mountains but was unable to find the kind of new discoveries for which he was searching. His diary is still full of contemporary information such as the scars of the relatively recent attack on Hanzhong by a Taiping army, his visit to the tomb of Fr. Étienne Faber (方德望) and his down-to-earth comments on its reported miracles. He was continually amazed by the abundance of fossils in the region, the unique geology of Liang Shan (涼山) and the rich bird and animal life. Finally, he found time to discuss his ideas on the compatibility of science and religion. But he also found himself increasingly lonely and was tiring.

On 16 April, 1873 he boarded a river boat at Chenggu to travel to Hankou in Hubei. His river voyage is also of interest except he was unfortunately boat-wrecked on some very dangerous rapids. He lost many of his valuable specimens which, no doubt, added to his melancholy. After staying a while in Hankou, Fr. David continued on to Jiujiang in Jiangxi Province. In May he went by land via Nanchang to Fuzhou, where, because his health continued to deteriorate, he and his companions were forced to stay. Confined to bed, Fr. David stayed there for the summer. Despite this, he used the time to classify and put his previously

¹¹ Using the Baron von Richthofen’s figures for portorage given earlier, this amounts to about a 10% tip on top of their agreed wages. Fr. David was a generous employer!

¹² Pius Vidi (OFM, 1842-1906, Chinese name Wei Mingde, 魏明德) Coadjugator Vicar Apostolic of Shaanxi 1886-1900.

collected specimens and materials into order. In September, when his health had improved a little, Fr. David returned to Wuyi Mountain, but found himself unable to undertake further field studies. Filled with disappointment and regret, he left China to return to his home in France and did not return to China. He did, however, continue to process the immense store of natural history that he had come across and published many papers and reports of his findings until his decease in 1900.

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