

Sir Eric Teichman and the Tangluo Shu Road

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1. Introduction

Sir Eric Teichman's journey into North-West China

Sir Eric Teichman (born in England in 1884) was a British diplomat who travelled extensively through China and other central Asian areas between 1917 and 1943 following which he was unfortunately killed, two weeks after returning from his last journey, at the age of 60. He was shot by two US servicemen from a nearby military base who were poaching on his estate in England with military grade weapons.

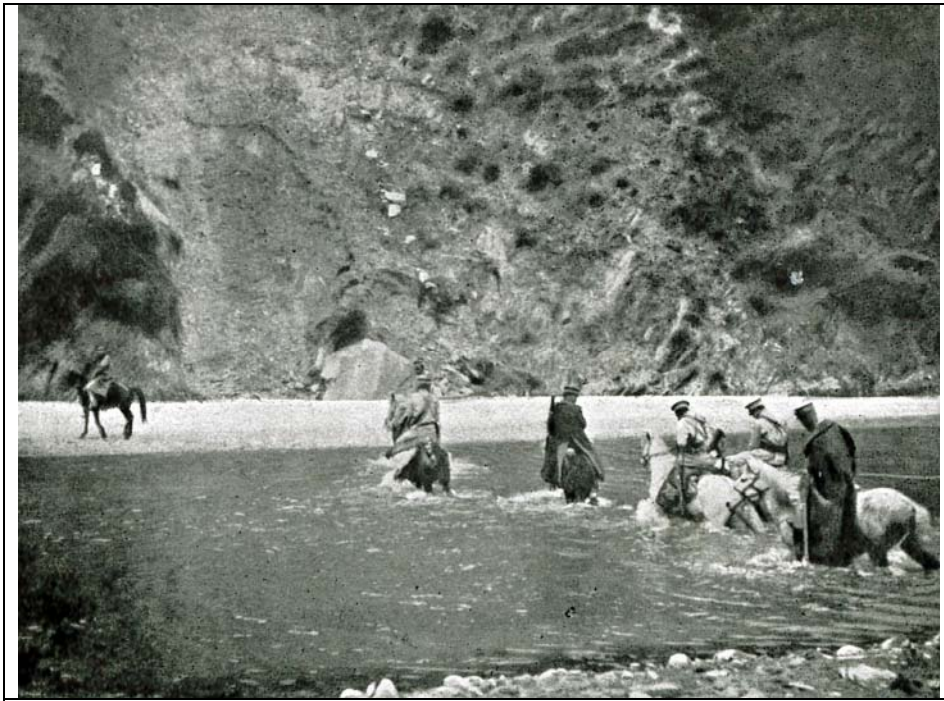


Figure 1: Sir Eric Teichman and party cross the Qianyou River (乾佑河) near Zhen'an Xian (镇安县) on their way across country to Hanzhong

During his energetic and active life, he wrote a number of books about his journeys, the first being “Travels of a consular officer in North West China” (Teichman, 1921). This book described his travels in 1917 as a Consular Officer principally to investigate the success or otherwise of the suppression of Opium cultivation under a treaty with the British Government, who, it may be argued, would have served China better by not allowing it to be imported during the previous 100 years. At the time, the Republic of China was struggling to define itself, and the more remote regions in the west of China were already being ravaged by bandits and warlord armies as well as natural enemies such as drought, famine and economic problems created by the fractured markets. It was a time when bandit armies such as the “White wolves” (Bai Lang, 白狼) could appear to sweep across the land like locusts and when impoverished village men started to move between occupations as farmer, soldier, bandit and road builder. When Sir Eric visited in 1917, he found that opium growing was at its lowest point since 1907 and wrote glowingly of the prospects for eradication. But the situation got rapidly worse as the death of Yuan Shikai led to

increased fighting within and between the rival northern and southern armies and by the time his book was published in 1921 his Preface sadly recognises that opium had once again bloomed throughout the west of China. Sir Eric's observations about the North West of China at the time, which include extensive material on the local political and social conditions he observed, personal observations about China and the everyday life at the time, provide a valuable historical study in turbulent times.

Sir Eric's association with Shu Roads came about as he took a route that maximised his experiences and observations off the major roads. Starting from Tongguan and determined to ride ponies rather than walk, he and his somewhat reluctant mounted official escorts had cut across a number of old roads (see Figure 1) to reach the Hanzhong Basin at present day Ankang. They had then moved on, via historically important linking roads and a visit to the interesting Catholic mission at Guluba, before finally arriving in Hanzhong. In Hanzhong, Sir Eric found that a level of stability prevailed. He wrote:

“When Yuan Shikai was busy with his monarchical scheme and was centralizing his rule by posting his own Generals and detachments of his Northern troops at various strategic points in the provinces, he sent a Northern Mixed Brigade into the upper Han valley to hold that region, and to keep open his overland communications with Sichuan. Owing to the geographical isolation of its position this Brigade and its Northern General were still in Hanzhong at the time of our visit, a year after Yuan and his short-lived Empire had been swept away by the rebellion of 1916, and were continuing to control the basin of the upper Han though the rest of the province was enjoying a sort of independent home rule. It must be admitted that under the control of these comparatively well disciplined Northerners the Han valley was much more peaceful and less preyed on by brigands than the rest of the province under home rule. Provincial independence and the loose federal system into which the Republic of China is now again drifting do not tend towards the maintenance of political stability and public security in the interior. So far the history of the past six years in China has proved the absolute necessity of a strong central administration, though, in the opinion of many competent Chinese and foreign observers, Peking, tucked away in a far distant corner of the country, with its apparently incurable atmosphere of reaction, is no longer the proper place for the seat of Government.”

Sir Eric Teichman's Tangluo Road travel

From the comparative stability of Hanzhong, Sir Eric decided to take his party on a very steep and difficult path across the main Taibai range of the Qinling to Zhouzhi in the Wei River Valley. This route basically followed an ancient Qinling Shu road called the Tangluo Road. It is this Shu Road, its history and its mountain environment that is the topic of this document with Sir Eric Teichman as our western Guide.



Figure 2: View of the Taibai Range from the Xinlongling Pass on the Foping Trail. (Photo by Sir Eric Teichman)

On the way to Zhouzhi, Sir Eric visited the Administrative seat of Foping District. Foping was set in a secluded and very beautiful valley near the main divide of the Qinling range at about 1750m ASL which is shown in Figure 2. It was a relatively recently founded administrative centre, being established in the late Qing period in 1824 as a “Ting” or third level District. After 1913 all Districts had become called “Xian” but Foping was still a lower level administration than most other Xian. It had been founded due to the presence of increasing traffic in the area at the time and to control the banditry that preyed upon it. In 1922, five years after Sir Eric visited, the bandits won, murdering the magistrate and effectively closing down Foping. In 1924, 100 years after it was first established, the District Seat was re-instated at a new location to the east which is the present day Foping County seat. Sir Eric’s description and notes about Foping are therefore important in the history of Foping as well.

Sir Eric’s discussion prior to choosing the hard road to journey also provides valuable information about the state of the Qinling Shu Roads at the time. He wrote (the original Wade-Giles names have been converted to Pinyin¹, comments are in [square] brackets):

“From Hanzhong it was our intention to re-cross the Qinling Shan back into the Wei valley. The Qinling Shan, or Nan Shan, which consist of a series of precipitous parallel ranges trending across the path of anyone travelling between south and north, have always proved an extraordinarily effective barrier to communication between the Han and Wei basins. It was this barrier which prevented the Taiping Rebellion spreading north from the Han valley into Central Shaanxi, and the Mahomedan Rebellion spreading south from the Wei valley into Southern Shaanxi; and in recent years it has kept the upper Han basin comparatively peaceful while rebellion and brigandage raged in the Wei valley and Northern Shaanxi. The Chinese have always

¹ In most cases, when Sir Eric’s text is quoted, the original Wade-Giles is used. In this and other cases, text quoted directly from “Travels of a Consular Officer” is set in *italics*.

designation for the top level seat of Government below Province and was similar in status to the modern day provincial City (市). Written in brackets underneath it is Wade-Giles “Changan Hsien” or in pinyin, Chang’an Xian (长安县), a District capital co-located with the Fu – as well as with the Governor of the Province since Xi’an was the provincial capital. Hanzhong is written as “Hanchung Fu” and in brackets underneath is the local district “Nancheng Hsien” or in Pinyin, Nanzheng Xian (南郑县). In the map, names use the Wade-Giles transliteration² and heights are metres whereas in the book heights are given in feet. Sir Eric’s map has provided a starting point for the generation of more accurate route maps for his journey and as a base for other tracks than make up the wider Tangluo road network.

The Ancient Tangluo Road

The “Shu Roads” (shudao, 蜀道) were a famous network of communication roads (see Figure 4) that allowed people, trade and armies to move between “Qin” (秦国, originally the State of Qin), or the Wei River valley of Shaanxi, and “Shu” (蜀国, originally the state of Shu) or present day Sichuan. To do this, they had to negotiate the hazardous and mountainous passes of the Qinling Range (秦岭). The Qinling is part of a major east-west striking barrier that stretches a distance of 400-500km and divides the north from the south of China. According to Meng and Zhang (2000), the formation of this barrier started a very long time ago at the end of the Paleozoic Era with collisions between the north and south China blocks. Over geological time, the movements of these blocks and the Himalayan Plate have provided the forces that continued to shape the Qinling. The mountain building resulted in changes in climate between north and south China. It led to north China drying, with desert and Loess soil formation and south China maintaining a relatively warm and wet climate up to and including the southern slopes of the Qinling. The events also led to the separation of the present Yangtze and Yellow river basins. The formation of the present characteristic valley and ridge formations of the geomorphology of the Qinling occurred in the Pleistocene Epoch of the Quaternary Period (Pan, 1988) with tectonic uplift followed by general erosion, and glaciation in the higher parts of the range above 2500m.

Since pre-historic times, people have been communicating across this divide. Li Ye (Li, 2008) discussed Paleolithic and Neolithic sites in the Hanzhong basin and concluded there was communication with both the Guanzhong across the Qinling as well as the lower reaches of the Han River. However, it was not until the Han Period in Sima Qian’s “Records of the Historian” (Sima, 120 BCE) that historical records of the Shu Roads started to appear, and from that time the Shu Roads entered China’s Cultural History as one of its most famous chapters. Accounts of the network of Shu Roads (such as those by Li Zhiqin, 1986 or Feng Suiping, 2003) report that there were seven main trunk routes (see Figure 4). Of these there were four crossing the Qinling linking Xi’an in the Wei River Valley with the Hanzhong Basin and three linking the Hanzhong Basin with the Sichuan Basin and the destination at Chengdu. The four in the north were called (from East to West) the Ziwu Road, the Tangluo Road, the

² In the rest of the document, quotations from Sir Eric Teichman use Wade-Giles transliteration but the text uses Pinyin. Correct Wade-Giles can be precisely converted to Pinyin.

Baoxie Road and the Lianyun (Cloud linked) Road. Those in the south (from East to West) were called the Lizhi (Lychee) Road, the Micang Road and the Jinniu (Golden Ox) Road.



Figure 4: The extent of the Shu Roads in China since ancient times.

But as to the complete story of these roads and the events that occurred along them, you will have to find it elsewhere as we focus on the Tangluo Road. My suggestion is that you start by reading the introduction written by the present writer that is available on the web [HERE](#) (Jupp, 2010). From there, Sir Joseph Needham's series "Science and Civilisation in China" covers the Shu Roads from an engineering as well as cultural perspective in Needham *et al.* (1971) and provides a number of useful English language references for further reading. Needham travelled the Shu Roads in 1943 and Sir Eric Teichman was travelling in the same convoy from Chendu north to Lanzhou. However, the most comprehensive English language description of the Shu Roads and their geography, history and extent is that provided by Herold Wiens in his Thesis of 1949 and in a summary paper of the same year (Weins, 1949a,b). A web page providing access to Herold Wiens' work can be reached [HERE](#). In recent years, Hope Justman (Justman, 2007) has written a very interesting and comprehensive book about Shu Roads. Hope Justman's web site can be accessed [HERE](#). Finally, it may be interesting for you also to read the paper by Alexander Wylie who travelled from Chendu to Hanzhong and on to Hankou in 1868 (Wylie, 1870). Wylie travelled along the "Gold Oxen" Road and some of the linking roads of the Hanzong Basin over which Sir Eric later travelled between Ankang and Hanzhong. A web page discussing Alexander Wylie's travels can be accessed [HERE](#).

For now, we will focus on the middle road through the Qinling followed by Sir Eric Teichman in his zigzagging journey of inspection across Shaanxi. Sir Eric made a very useful appraisal of the roads that has been quoted above. He emphasises the role of the Qinling Barrier in China's geography, climate, history and culture. It would be

risky to undervalue the comments. However, among scholars, the Tangluo Road is regarded as the least used of all the Shu Roads. This comes from assessing “use” in terms of its appearance in the historical records. In this document we will also make reference to a paper by Zhou Zhongqing (Zhou, 2008) in which some re-evaluations of this official opinion are made. So, we should start with the official story of the Tangluo Road to give context to later discussions. For the standard text we will use the major work by Prof Li Zhiqin called “Ancient records of the Shu Roads” (Li, 1986). This book summarises the history and importance of the Tang Luo Road as follows (Chinese text and this translation can also be found in a separate document available [HERE](#)):

“5. The Tangluo Road

In comparison with the previously mentioned roads [Baoxie Road and Ziwu Road], the historical records of the Tangluo Road are relatively recent. Chen Shou (Western Jin Period) in his “Records of the Three Kingdoms” recorded how in the Three Kingdoms Period, Cao Shuang, from the Kingdom of Wei, used this road to attack Shu, but because the road was blocked after heavy rain, he had to withdraw. He also recorded how the Shu General Fei Yi sent his army to three mountain passes to block Shuang, how later, the Shu General Jiang Wei sent an army to exit from the Luo Valley and attack Wei, and how in addition the Wei General Zhong Hui used three routes to attack Shu, with the Tangluo Road being one of the routes they took.

The route for this road is as follows: South-west from Chang’an, via Huxian west to Zhouzhi Xian, turning south-west for 30 Li (12 km), from the West Luo Valley mouth to enter the mountains. It then passes the Luo Valley Gate, through the upper reaches of the Black River tributary Chenjia River, to reach the Laojun Pass. It then follows the Badou River and the Damang River Valleys, to reach Houzhenzi near the western source of the Black River. After that it crosses the Qinling main ridge to reach the source of the Han River tributary, the Xushui River, at Dudu Gate. It then goes to the south west over the Xinglong pass, which is even higher than the Qinling water divide. There it enters the upper reaches of the Youshui river valley to reach Huayang Zhen in Yangxian District. From Huayang Zhen you can go south-east along the Youshui River to Maoping, through Bali Pass, then changing direction to the south west go across the Guanling Pass to reach Baishi Yi, and exit by the Tang River Valley. Alternatively, you go south west from Huayang Zhen, to cross the Niuling pass and exit (again) by the Tang River valley, from whence after 30 Li (12 km) you reach Yangxian. From Yangxian along the north bank of the Han River you cross the Xu River to arrive successively at Hanwang Cheng, Chenggu Xian and Liulin Zhen to finally arrive at Hanzhong. Looking at the statistics, the overall length of the Tangluo Roads is about 765 Li (306 km), in which the distance through the valley roads is about 500 Li (200 km). It is the shortest route among the northern Shu Roads for a journey from Chang’an to Hanzhong, as well as the most convenient.

The reason why the Tangluo Road was given its name is because of its initial valley roads. In the north it is the West Luo river valley, and in the south it is the Tang river valley. As previously indicated, although the sections of the route following the tributaries of the Wei and Han rivers are initial parts of the route, the greater part successively crosses 5 or 6 precipitous watershed ranges. Therefore, even if the ancient saying that “every valley has two mouths” can arguably be applied to the

Baoxie Road, in the case of the Tangluo Road it does not make sense. Although among northern Shu Roads the Tangluo Road is the shortest and most convenient, it must cross watershed passes that far exceed those of the other roads. Consequently, the road is unusually hard and dangerous. From relevant records, we find that in the northern section near the Luo Valley Gate there is the famous Shiba Pan (18 bends) mountain leading to the Laojun Range. Between the Laojun Range pass and Dudu Pass, the road winds across several tributaries of the Black River on the southern side of Taibai Mountain, the highest peak in the Qinling, along whose winding route there are few settlements, and where wild animals appear from and disappear into the dense forests. After passing the main backbone of the Qinling at the Xinglong Range, near the boundary marker of Yang Zhou there is the famously rugged and dangerous Bashisi Pan (84 bends) that extends for 80 Li (32 km). Not only is it said: “cut rails in the air, dangerous trestles stretch away” but here are places known as “Naodong” and “Hades Gate”, dotted with poisonous plants and [fierce] animals. Travellers all feared passing through these places.

In the development of the Shu Roads, the Tangluo Road was opened up for use relatively late and its period of use as an official postal road was quite short, which is probably related to the above [dangers]. We can deduce that although this route was open at the beginning of the Tang Gaozu Wude period, it was not at that time an official Post Road. After it was first used as a post road, following the middle Tang period, it was used frequently. Officials travelling to make reports, envoys and special missions all used the road. In the time of Mingzong of the Later Tang it was rebuilt at one time, but after that it had little traffic and work stopped. The Northern Song “Records of the Taiping Huanyu” recorded some distances on the route and the “Chang’an Gazetteer” recorded the existence of and distances separating some postal stations in the northern and central sections of the road. But specific material concerning the utilisation of the post road has not been seen. In the Five Dynasties (907-960) period this road became desolate and blocked. In regard to the Yuan, Ming and Qing periods, the Tangluo Road was never again used as a postal road.

Today you can travel from Zhouzhi to Yangxian via a recently made bitumen Highway, but the route of this road is to the east of the ancient Tangluo Road. The new road goes south along the Black River Valley to cross the Qinling, then down along the upper reaches of the Jiaoxi River, which is a tributary of the Ziwu River, across to the Jin River, finally joining the ancient Ziwu Road to reach Yangxian. Among the valley roads of the ancient Tangluo Road, the only main roads at this time are between Yangxian and Huayang in the south and [between Zhouzhi and] the entrance to the Luo River valley in the north.”

The period of utilisation of the road is given by Prof Li Zhiqin as between the Three Kingdoms (roughly 200 CE) to the end of the Tang (roughly 900 CE) with most in the later part of the Tang period. In Feng (2003) there is also a summary of the Tangluo Road (shorter than that provided by Prof Li Zhiqin) which contains the following additional information:

“In recent years, on the basis of a passage in the “Shimen Ode”: “Pushing through closed valleys, scaling the bright halls”, scholars believe that the “closed valleys” and “bright halls” refer to this route. This would confirm that the Tangluo Road was already being used in the Eastern Han period. From the historical records it is clear

that the period of most frequent use of this road was during the middle to later Tang Period after the Anshi Rebellion (775 CE). Because of the frequent wars in the Guanzhong, its convenient geographical position, and the need for Tang Emperors to take refuge in “Fortunate Shu”, the (Tangluo) road seems to have flourished over this time.”

This excerpt is consistent with the previous summary by Li Zhiqin but pushes the established first written record back into the time before the start of the Common Era. Apparently, among Shu Roads, a recorded period of use of about 1 millennium still rates as “little used”.

The presentation contains information about the places marked as well as general information about the linking routes and the overall presentation purpose. These are all generated from a data base that can be updated as information changes. The data base used here is simple and is based on a structure familiar to people using GPS systems. There are three types of spatial object recognised; they are “Waypoints”, “Routes” and “Tracks”. “Waypoints” are places with geographic coordinates and information about what can be found there. In general they are towns, townships and villages as well as other geographical places such as mountain tops, passes, road junctions or Barrier Gates - including modern toll gates! A “Route” is a linking path through an ordered set of waypoints. The “path” is usually represented as straight lines from place to place. In traditional GPS technology, Routes are planned journeys defined by the places visited or passed on the way. They are much the same here, except here they specifically represent roads when there is no information that would enable the actual path on the ground, or even a reasonable estimate of it, to be mapped. The routes described by Prof Li Zhiqin (Li, 1986), Zhou Zhongqing (Zhou, 2008) and others are normally indicated by the places along the way, so a Route is commonly the starting estimate for a road. Finally, “Tracks” represent (estimates for) the actual path on the ground followed to go between Waypoints. In some other presentations developed by the present author, they are GPS Tracks recorded in the field but in this case they are estimates or proposals for the path that may have been followed. How these estimates have been made is a major topic in this Section of the present document.

Some of the tools available to re-create such ancient paths have previously been described in documents available on the Qinling Shu Roads web site [HERE](#). If you are interested in the more technical details it is useful to read this document (direct link to the PDF is [HERE](#)) first. But it is *not* necessary to read it first if you are simply interested in the final result. The details of the data base structure and conversions of the data base into a Google Earth presentation are not covered in the present document. Suffice it to note that the Waypoints are maintained in an Excel spreadsheet and converted into KML (see tutorial [HERE](#)) via GPX files (a standard XML file structure described [HERE](#)) and the Routes and Tracks are maintained as GPX files and edited using Garmin GPSMap (see website [HERE](#)) software. Many Tracks were also derived from Google Earth directly. All conversions between file formats were made using the GPSBabel (see website [HERE](#)) Software.

Materials and Methods

There was a considerable range of different materials and information sources available. The most basic were:

1. Route descriptions

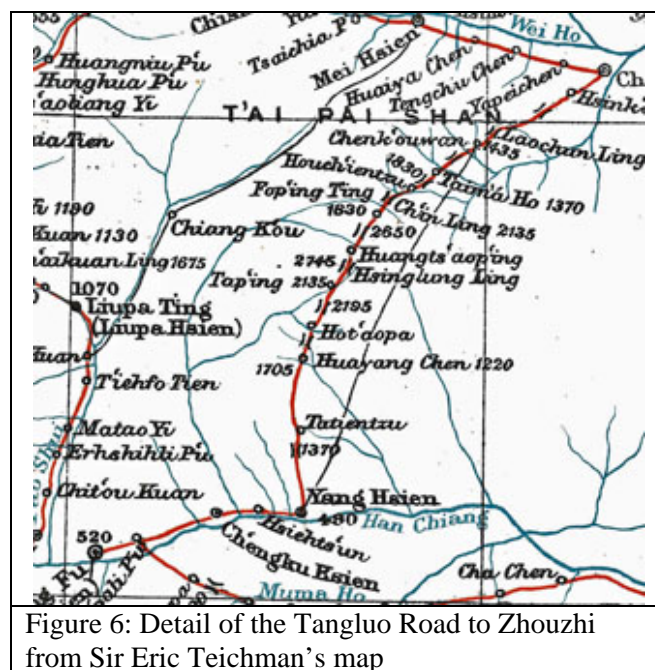
The route descriptions used to develop the proposed network are those provided by Prof Li Zhiqin in Li (1986) which is included in this document in translation; a set of Routes for the main trunk road and alternative routes listed by Zhou Zhongqing in Zhou (2008) and discussed in more detail here later; and finally, a detailed published track log provided by Sir Eric Teichman for his journey in 1917. Teichman’s track log includes descriptions of the terrain, passes crossed and river valleys followed. It also

includes estimates of stage distances in Chinese Li and altitudes at selected places measured with a pressure barometer that he carried with him. Because Teichman's description is especially important to this project, an edited version of text from his book (Teichman, 1921), stripped of all references to other topics that Sir Eric often included (such as general observations on China and Chinese, the political situation, the environment etc) has been provided as a separate document (PDF can be accessed [HERE](#)) and also included as an Appendix (Appendix 1) at the end of this document.

In a separate technical document, it is statistically shown how the altitudes measured by Sir Eric Teichman were accurate up to a small but consistently increasing over-estimate with altitude (not an uncommon issue with early pressure measurements). Given the relief of the area, the technical study shows that the proposed route is consistent with Teichman's measurements. The distances travelled on each stage were recorded in Chinese Li. For the work undertaken here, Chinese Li were converted to Km by taking 1 Li to be 4 Li to a Mile or 400m. Despite the fact that the Chinese Li has historically been a complex and variably defined measure of distance (Qiu, 1990), this rough estimate in Km was enough to locate a place into a close proximity of its true position and allow local adjustments to be made taking other information into account. The separate technical document also analyses the relationship that exists in this area between the Li and its metric equivalent.

2. Sir Eric Teichman's map of his journey

In addition to a detailed track log, Sir Eric Teichman published a map of his travels through northwest China. A sub-image including his estimated route over the Qinling Range is shown Figure 6.

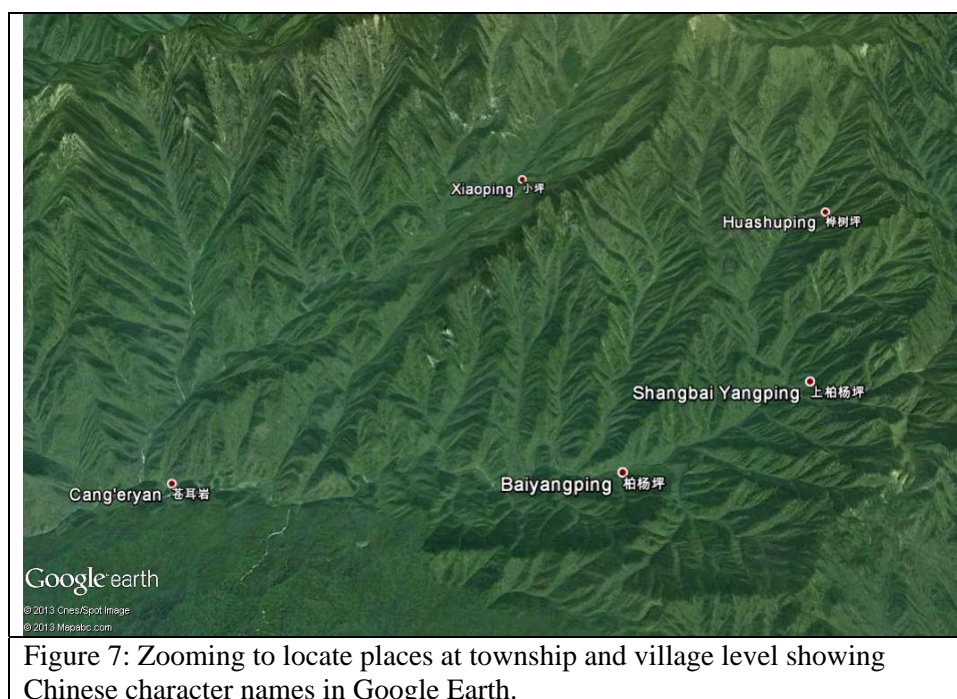


A scanned version of the complete map in Figure 3 was scaled to latitude and longitude and used to set up an initial approximate Google Earth route for the journey shown in Figure 6. The route on the map included Sir Eric's estimates of prismatic compass directions and distances as well as places along the way. With some scaling

of the major towns to known positions it provided very useful starting estimate and was then gradually improved locally in line with the ancillary information described here.

3. Other Base Maps

A variety of other maps has been available for use in this work. Coarse scale maps such as a 1:900k “Shaanxi Map” (陕西省地图) from 2005 and more detailed road maps such as the “Shaanxi Atlas” (陕西省地图册) from 2007 and 2009 with county level maps at scales from 1:200k to 1:500k have been used as well as Google Maps and Google Earth which can also serve as basic maps. It is curious that the various “Shaanxi Atlas” maps at County level were all useful – on both dates, and in all of the Counties that include sections of the routes of the Tangluo Road (Yangxian, Foping and Zhouzhi) in different ways. Names at village level are apparently still not fully settled and have either changed in the time spanning the editions or else perhaps one of a number of alternative names was used in any one situation.



The purpose of using these sources is to help locate towns and places listed in the routes and provide a rough guide to their location in relation to the terrain and other places. Teichman’s places use the Wade-Giles transliteration so that the various alternative maps also served to establish Chinese characters for his names. Places down to village level can be found in Google Earth and Chinese characters can be provided by selecting the “alternative name” setting (eg see Figure 7). The geographical accuracy of the places found in this way is not very high but these facilities have been very useful to indicate that such a place did occur nearby and to provide or confirm the name in Chinese characters.

Finding places at village level in Google Earth is not always straight forward. Places are present but only shown at various “levels of detail” so that when the country is viewed only capital cities are seen and more names appear as you “zoom” into

specific locations. This works well with places down to near “Zhen” level or inside the boundaries of major cities. However, at village level in the west many quite well populated settlements cannot be seen unless a full “zoom” to ground is made and others which are at most only a few huts are “seen” well before the populous ones. The people who distributed the places to different levels of detail clearly did not have the information at this level to make an informed choice. In the end, however, this was more annoying than serious.

What is a more serious issue in Google Earth is the presence of inaccurately located and hazy background images over much of the area of interest. This necessitated using other map sources for our work. We found that a 1:100k and 1:200k series of Russian Military Topographic maps (East View Cartographic, 2005) was very useful. They were obtained from East View Cartographic (website [HERE](#)) as GeoTiff files. These files can be imported into Google Earth (usually as “super overlays”) as a background image (see Figure 8). They include height contours and were developed in the 1960’s from aerial photography carried out by Soviet aircraft. The photographs were flown to provide military terrain maps and were not made available to China. They show villages down to several huts and seem quite satisfactory in detail for terrain and river networks although absolute height values in the mountains are presently in question. Because they were flown in the 1960’s, the roads they show are often not those of the present day. Sometimes, this has been a significant advantage for the present study! Background information about this series is in a separate publication that can be accessed on the [Qinling Shu Roads website](#) (PDF file can be accessed directly [HERE](#)).

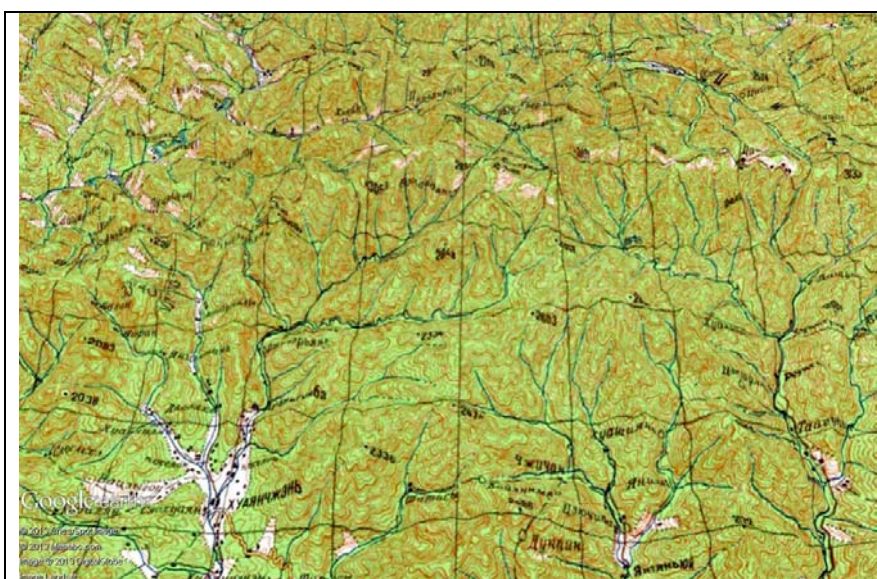


Figure 8: Russian 1:200k Map of the Tangluo Road area imported into Google Earth and displayed with 3D Terrain effect.

The final map used to advantage was a Qing period map (*ca.* 1815-1820) that can be accessed from the US Library of Congress collection of Ancient Chinese Maps (example and information about access can be found [HERE](#)). It was published under the name of a well known Qing scholar official Yan Ruyi (严如煜, 1759-1826) and shows many of the paths across the Qinling that seem to have been in active use at that time. Among them are all of the routes we have eventually included into the

Google Earth presentation. In particular, this map was able to resolve the exit point for the route Sir Eric Teichman took after crossing the Laojun Range on his way to Zhouzhi. It is not, of course, accurate by modern cartographic standards but it is topological and provided good corroboration of the routes provided by others as well as some linking paths otherwise not mentioned in the official sources.

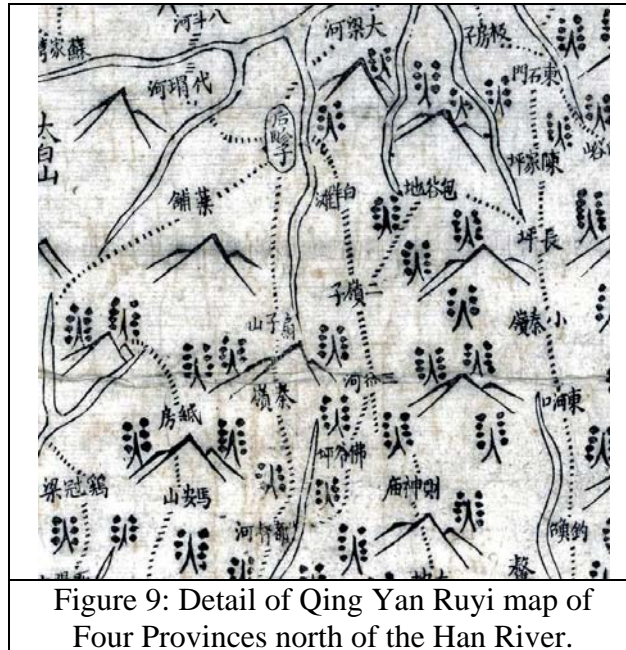


Figure 9: Detail of Qing Yan Ruyi map of Four Provinces north of the Han River.

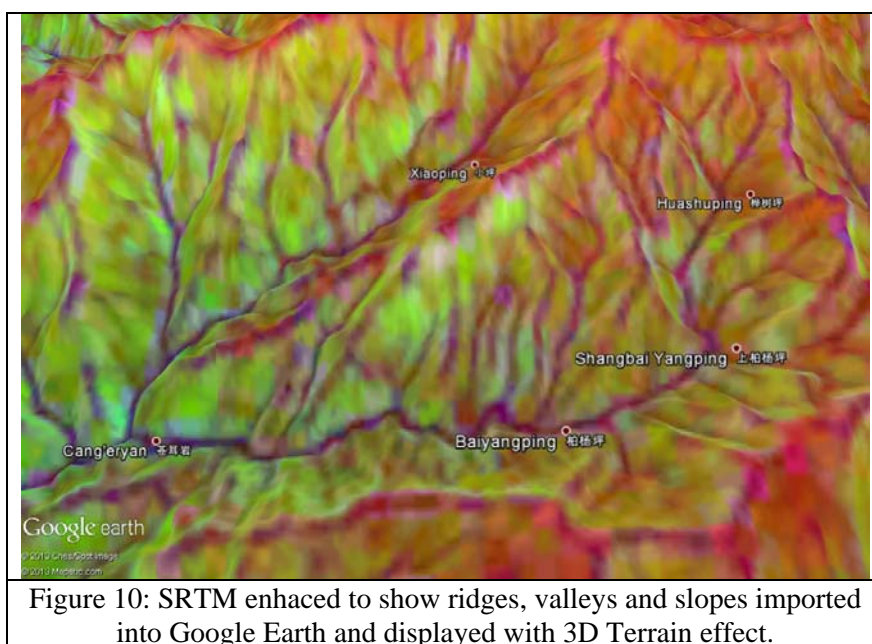
The sub-image in Figure 9 has been extracted from the Qing Yan Ruyi map of four provinces and shows Houzhenzi on the upper reaches of the Black River. The extensive network of dotted lines shows paths along which the Qinling trade was active here in the mid to late Qing period.

4. 3D Terrain Images

Google Earth allows the terrain to be viewed and draped with the background image in 3D view. This allows valleys and mountains to be located and used to identify the routes using terrain based descriptions. The way that ancient people found to cross the Qinling was generally to follow river valleys into the mountains to higher areas where there was a suitable pass across the water shed into the next catchment. From there, a new river valley was followed downstream, often to cross at an internal pass (possibly more than one) between sub-catchments and then upstream again to where another pass to a new watershed could be found. The ridges and hilltops were generally inhospitable and difficult to cross as the Qinling terrain is relatively young in geological time and still being modified by weather and water. The strike of the Qinling is also roughly East-West. Rivers have cut through the terrain across the strike forming steep sided gorges that have always been difficult to pass through – especially in flood times. In these gorges, the Plank Roads were the technological advance that was needed for more than the bravest scouts to pass. In the Qinling, in the upper reaches of the central spine there are also additional opportunities in the presence of ancient glaciated terrain. Sir Eric describes some of this geology in his description but the general travel style of alternating river valleys and bridging passes

forms the terrain basis for the journeys. These characteristics can be used to advantage in finding the most likely routes when the rugged terrain limits the possible paths.

The 3D terrain capability of Google Earth is very useful in this way, and the terrain can also be further enhanced by using the same SRTM (Shuttle Radar Terrain Mission) data that provides the underlying terrain surface in Google Earth to display valleys, ridges, passes and hilltops. The SRTM data can be imported into Google Earth in the same way as the maps and fits perfectly with the height information used there to provide the 3D view. When the image background used by Google Earth is poor, the Russian Maps can be used in this additional integration of terrain information and places that can then be used with descriptions such as the one Sir Eric Teichman provided to help locate his track from its information on river, streams, ridges, passes and hilltops.



In the image shown in Figure 10, the blue-ish lines are streamlines and the red-ish lines are ridges with green being general mid-slopes in a catchment. Stream beds in valleys and passes are clearly indicated and can be used to advantage for mapping the Tanguo Road if a terrain based description – like that provided by Sir Eric Teichman - is available.

Sir Eric Teichman's Route

As previously discussed, Sir Eric published a detailed track log and a map for his route in a book (Teichman, 1921). As noted above, the track log has been edited to contain only references to the track and the places visited and made accessible here in Appendix 1. It will be summarized briefly in the present Section of this document but the story is better if you read Sir Eric's account first! Sir Eric's map, from which a detail has been already presented above, is at a very general scale but it is a valuable map based geographic summary for which he claims to have used compass directions and distances in its compilation. On the map he notes:

“Drawn by the Author from his prismatic route traverses and Chinese maps and adjusted, at the places indicated by letters to the surveys and astronomically determined positions of Clementi (C) Tafel (T) and Filchner (F). Heights in metres (approximate only). Heights obtained from other travellers are shown by letters as above. Heights marked (G) are from the Karte von Ost-China 1/M.”

Teichman’s map is presented at 1:2,000,000 (1:2M) scale. The projection is not indicated but there is an annotation reading: “Reproduced by permission of the Royal Geographical Society”. The Karte von Ost-China 1/M was published in 1909 and covered East China. Beverly Presley of Clarke University (personal communication) has seen this map in the University collection and reports it also has no projection or datum information – but does indicate that map information was provided by Ferdinand von Richthofen (1833-1905) who was travelling in similar places as Sir Eric but 30 years before. In order to try and use the map to position the places marked and use the route as a first estimate, it was therefore conjectured that the map projection could be Lambert Conformal Conic, a common projection for maps of this scale and latitude and standard latitudes of 33° and 39° were chosen to cover the region of interest. The zero can be arbitrarily chosen for convenience so it was put at the centre of Teichman’s map – latitude 35° and longitude 108°. The datum used was the modern WGS-84 GPS datum.

If this were the actual projection and datum, the image coordinates of a metric scan of Teichman’s map would be related to (x,y) in the projection by knowing the (x,y) coordinates of the top left corner of the image and the image pixel size (x and y) in metres. These were estimated by obtaining image coordinates at the crossing points of the latitude and longitude grid and using least squares. What seemed a close match was obtained with a scan pixel size of 84.08m in x and 84.46m in y. By scanning at 400 DPI, an image of size 7271 samples and 7300 lines had been obtained that resolved the map in great detail. The RMS of the association between the grid points and their estimated values using the model was about 800m. This is respectable at the nominated scale but it would have been nicer to do better. Most likely any improvement in this estimate will need at least the actual projection and datum to be used.

The next step was to obtain the coordinates in the image of Teichman’s places, convert them to metres in the projection model and invert the projection model to get latitude and longitude. When this was done the route and waypoints (places on the route) could be plotted in Google Earth, from which it appeared that after Huayang, Teichman’s mapped route went too far north. It also did not match well at the modern day locations of Yangxian and Zhouzhi. Consequently the coordinates were adjusted using selected known places – including Yangxian, Huayang, Houzhenzi and Zhouzhi. The change was restricted to being a common shift of all points. This simulated a datum shift and the final initial estimate has been plotted in Figure 11.

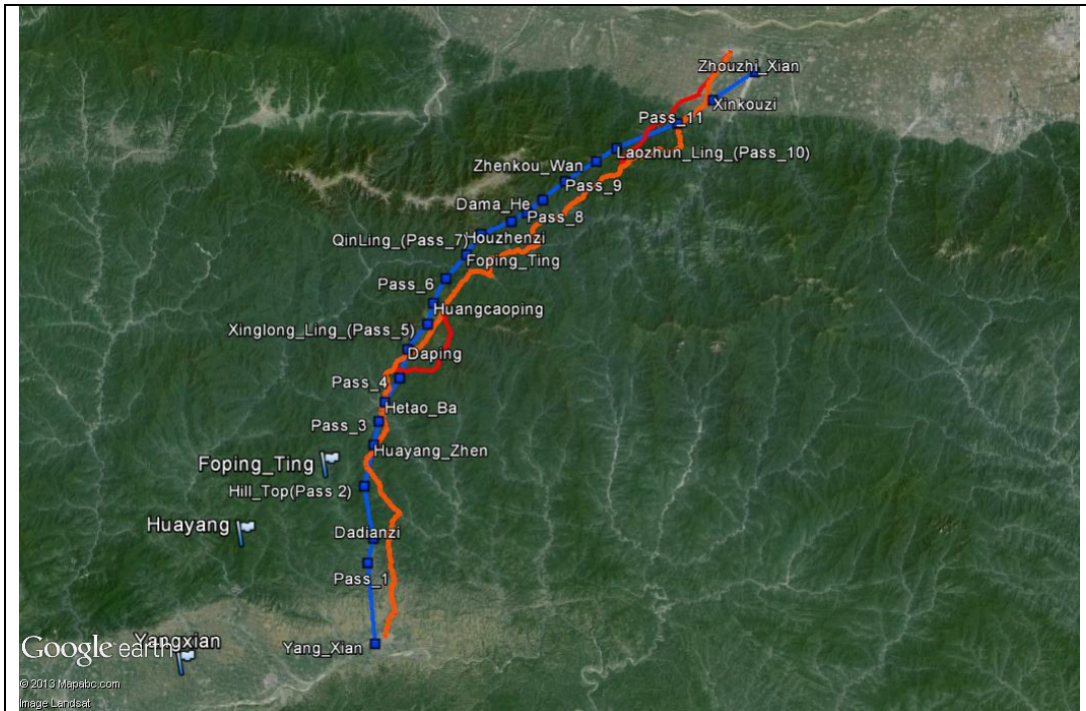


Figure 11: Plot of the route Teichman described as taken from his book and map. The blue line is the route inferred from the map and the orange line is the final estimate for the route based on all available information.

The initial estimate is shown in Figure 11 along with final result after the adjustment process to be described. The blue line is the final estimated route of Teichman's journey obtained in this way and the orange line is the Teichman route in the current draft presentation. The blue flags show some places mapped according to their coordinates in the "Index to The New Map of China" published in 1916 (Dingle, 1917) in Shanghai. The Zhouzhi entry plots off the top of the area shown. Clearly, Teichman's map was much better than the "New Map of China" but there was still a long way to go to obtain good base maps of the west of China and so the result obtained was probably as good as one could expect.

At the time this work was done, the present author had no map of the route and had only established a few main places such as those that were used above to adjust the map route (Yangxian, Huayang, Houzhenzi and Zhouzhi). So the route started out as the list of places on the initially estimated path which were then moved and relocated individually as additional information was used. This adjustment process used existing maps, Russian maps, Google Earth and 3D enhanced SRTM images of river valleys, ridges and passes. The Russian maps were especially useful for their detailed maps of rivers to quite high orders of branches, ridge and gulley delineation and the presence of secondary roads that were in use in 1960. Relatively few of the roads at that time would have been motor roads. As a result, a final set of places and some information about them has been put together with a terrain based commentary as follows:

Teichman Tangluo Road Journey Summary

Teichman WG	Pinyin	汉子	Teichman Altitude Text (ft)	Teichman Altitude Map (m)	Converted Altitude Text (m)	Teichman Comment
Yang Hsien	Yang Xian	洋县	1300	490	396.24	Start of journey
Pass 1	Pass 1	马道梁	4400	1370	1341.12	Top of first range.
Ta Tientzu	Dadianzi	大店子	3000		914.4	End of stage (ie overnight) 65 li from yangxian
Hohsiatzi	Heixia Zi	黑峡街				Past the hamlet of Hohsiatzu
Pass 2 (Hill top)	Pass 2 (Hill Top)	牛岭	5500	1705	1676.4	
Huayang Chen	Huayang Zhen	华阳镇	4000	1220	1219.2	End of Stage 65 Li from Dadianzi

From the Yangxian end, it seems Teichman and his party went north over the plain to cross the first range at a place called Madao Pass (马道梁) and then move into the valley of a river today called the Longdong River (龙洞河). It is a tributary of a major river called the Youshui (酉水) but in the past also seems to have been referred to as the Heixia gorge (黑峡). They stayed overnight at an Inn called Dadianzi and then moved up into the headwaters of this stream, crossed at a pass that seems to have been called the Ox Range (牛岭) to move onto the main branch of the Youshui River continuing north to the major centre of Huayang (华阳镇).

Teichman WG	Pinyin	汉子	Teichman Altitude Text (ft)	Teichman Altitude Map (m)	Converted Altitude Text (m)	Teichman Comment
Pass 3	Pass 3	关三	6000		1828.8	Boundary between Yangxian and Foping
Hot'ao Pa	Hetao Ba	核桃坝				Some huts called Hot'ao Pa
Pass 4	Pass 4	关四	7000??	2195	2133.6	
Ta P'ing	Daping	大坪	7000??	2135	2133.6	End stage 60 li from Huayang

Pass 5 (Hsing-lung Ling)	Pass 5 (Xinglong Ling)	兴隆岭	9000	2745	2743.2	15 Li from Daping
Huangts'ao P'ing	Huangcao Ping	荒草坪				Some huts, called Huangts'ao P'ing
Pass 6	Pass 6 (Caishen Ling)	财神岭	7000	2650	2133.6	
Fop'ing Ting	Foping Ting	旧佛坪	6000	1830	1828.8	End of stage (Est. 60 Li from Daping)

After Huayang, the route continued up stream, still on the main branch of the Youshui, and across 4 passes, two of which are more than 2000m above the plains where Yangxian and Zhouzhi are located. After crossing the first two lower passes and passing the boundary between Yangxian and Foping they stayed overnight in “some huts” at Daping. The first high pass after Daping was Teichman’s Pass 5 crossing the Xinglong Range (兴隆岭) and the second high pass (Teichman’s Pass 6) was across the Caishen (God of Wealth) Range (财神岭). Crossing the Xinglong Pass took them out of the headwaters of the Youshui and into the upper reaches of a tributary of the Xushui (潜水) River called the Dajiangou (大涧沟) where they passed “some huts” called Huangcao Ping to then crossed over the Caishen Pass and into the headwaters of another tributary of the Xushui River called the Dudu River (都督河) down which they travelled to the main valley of the Xushui which was the primary catchment they were in after the Xinlong Pass. The Xushui is a large river draining an area up to the main watershed boundary of the Qinling which eventually reaches the Han River near Chenggu (城固) half way between Hanzhong and Yangxian. The valley of the Xu River is wide and generally below the winter snow line with some arable soils. It was here that they reached Foping Ting – now called Lao Xiancheng (老县城).

Teichman WG	Pinyin	汉字	Teichman Altitude Text (ft)	Teichman Altitude Map (m)	Converted Altitude Text (m)	Teichman Comment
Pass 7 (Ch'in Ling)	Pass 7 (Qin Ling)	秦岭	7000	2135	2133.6	
Houchentzu	Houqianzi	厚畛子	4500		1371.6	Houchentzu is reached, where the valley opens out and there is some cultivation
Pass 8	Pass 8	关八	6000	1830	1828.8	

Taima Ho	Dama He	大蟒河	4500	1370	1371.6	End of stage 60 li from Fop'ing
Pass 9	Pass 9	关九	6000		1830	Ridge 1500 ft above valley
Ch'enk'ou Wan	Zhenkou Wan	称沟湾		1435		Hamlet of Ch'enk'ou Wan
Pass 10 (Laochün Ling)	Pass 10 (Laojun Ling)	老君岭	7500	2285	2286	

From Foping Ting they climbed to a pass over the Qinling water divide (Teichman Pass 7) and into the main catchment of the Black River (黑河). The Black River flows to the Wei River, meeting it near Zhouzhi which then flows into the Yellow River. From the Pass they moved along a stream to the significant township of Houzhenzi, still in the upper reaches of the Black River. Although a possible (but difficult) route for the Tangluo Road was down the Black River valley to Zhouzhi, it was apparently not the most common route in ancient times. Teichman's group moved through the upper valleys of the Hongshui (红水河) and Badou (八斗河) rivers which both drain into the Black River. They crossed at two passes to reach the individual catchments of the river valleys and finally reach a famous strategic pass across the Laojun Range (老君岭).

Teichman WG	Pinyin	汉字	Teichman Altitude Text (ft)	Teichman Altitude Map (m)	Converted Altitude Text (m)	Teichman Comment
Watientzu	Wadianzi	瓦店子(?)	5500		1676.4	End of stage 60 li from Taima Ho
Pass 11	Pass 11	关十一				Summit of SE trending ridge
Hsink'outzu	Xinkouzi	辛口子		610		End of stage 80 (?) li from Watientzu
Chou-chih Hsien	Zhouzhi Xian	周至县		365		Journey end, 30 Li from Xinkouzi

From the Laojun Range there are three main available paths. The most famous was to cross into the upper reaches of the Luoshui river to the West Luo Ravine (西骆峪). The Luo river provides the Tangluo Road with the second half of its name. It is also possible to re-join the Black River from the Laojun Range via the Chenjia River (陈家河) and go downstream to Zhouzhi. But it seems (using various clues including the Qing period map of Yan Ruyi) that Teichman and his party took a third way – down along ridges and into a valley called the Xinkou Yu (辛口峪) from where they went on to Zhouzhi across the Wei River flood plain.

The beginning and end of Teichman's route

Almost all of Teichman's named places have been located to as close a position as possible without visiting on the ground with GPS and notebook. The only missing place is the last overnight stage before the party reached the plains near Zhouzhi and was called "Watientzu" by Teichman. His use of Wade-Giles was strict so we know the pinyin would be Wadianzi but it has not been found. A place called "Luo Valley Gate" was listed in a close location by Li Zhiqin (Li, 1986) but it is not certain if it is the same place. The location of Daping on the road between Huayang and Foping is also still uncertain despite some maps having a place of that name in that area. The location it has been given at this time seems logical in its general location as the Xinglong Range Pass and the Caishen Range Pass are correctly placed, Huayang and the rivers north and east are well placed and there seem to be very few options among ways to move through the Youshui valley. There were two Passes listed by Teichman between Huayang and the Xinglong Pass. They are passes between sub-catchments used in the type of move where the track cuts over ridges between tributary sub-catchments to avoid going downhill. One of these still seems to be in the wrong place. Possibly only ground checking will resolve these issues.

When the first draft of the Teichman route had been completed, the two sections of the route with least certainty were the first stage to Dadianzi and the penultimate stage from the Laojun Range to the Wei Plain at "Hsink'outzu". Certainty about the initial route was strengthened when the network described by Zhou Zhongqing (Zhou, 2008) was investigated. It seemed likely, based on the few but significant common waypoints they share, that the initial path of the Main Trunk Route as described by Zhou was the same as the path taken by Sir Eric Teichman. Because of this, the places listed and found in maps from Zhou Zhongqing's Main Trunk Route have been used to help fill in that section of Sir Eric's route. But while the initial path can be identified with the Main Trunk Route for practical purposes, it must remain as "not fully certain" because Teichman gave so few details for the journey from Yangxian to Dadianzi.

In regard to the penultimate route to the Wei Valley plain from the Laojun Range, it is quite possible that the pass selected over the Laojun Range is a fair choice but the location of the overnight stopover at Wadianzi (just north of the pass) has not been found in any map. The end point of this section of the route at Xinkou (i.e. 辛口) was also for some time unable to be found in maps or Google Earth. It was originally assumed that the journey must have moved into the upper reaches of the Luo River but Sir Eric's track log is again brief during this stage. However, the Qing period map by Yan Ruyi and Zheng Bingran (1813-1820) mapped all of the major valley openings into the Qinling from the Wei Plain. In the "Four Provinces Map" (Yan, 1822) the three valley entrances near Zhouzhi are shown in Figure 12.



Figure 12: Detail near Zhouzhi from Qin Yan Ruyi map showing the three valley passes (峪) into the Qinling Mountains.

The three (Left to Right) are the West Luo Valley (西骆峪), the Xinkou Valley (辛口峪) and the Tiger's Mouth or Flatiron Valley (虎峪口 or 熨斗峪). On the Xi'an side of the Black River there is the "Black River Valley" but this was disregarded as the Qing map indicates that the extension of this road does not reach Laojun Ling or Houzhenzi whereas all three of those entering from the Zhouzhi side do.

It would seem, therefore, that the Teichman mission did not use either the Luo Valley or the Black River, but rather moved from the Laojun Pass into the upper reaches of the stream that emerges at Xinkou. While a recent (but very unstable) road can be seen in this area in Google Earth, the presently estimated path must remain as "uncertain" as Teichman provides only sketchy details from this part of his journey. One of the villages listed on the Qing period map can also be found on present day maps. It is Qinggang Bian (青岗碛) and its approximate location has been added to the presentation as an ancillary place. As some final support, Zhou Zhongqing, in his discussion of the central place of Huayang in the mountain traffic writes: "Guanzhong people coming south to Yangxian, whether they went via Xinkouzi (辛口子) in Zhouzhi County, via the West Luo Valley, or via Guozhen in Baoji County, or even if they went via the Xie Valley Pass in Qishan County, must all pass through." Clearly, Xinkou at least is well established with historians and so, very likely, are both of the routes we have selected at the beginning and the end of Sir Eric Teichman's journey from Yangxian to Zhouzhi.

Zhou Zhongqing's main trunk route

A similar process can be used with the lists of routes based on places given in Zhou Zhongqing's paper. Zhou (2008) writes:

"In the same way as other ancient roads, the Tangluo Road has the appearance of a distributed network. However, it had a distinct main trunk route."

He then listed the main trunk route as an ordered set of places that starts from Yangxian and ends at Zhouzhi. The route seemed similar to that described by Sir Eric Teichman due to a number of points of similarity in the path from Yangxian to Dadianzi. They have subsequently been identified in our presentation. But at the level of local places, this identification is not without some remaining doubts and questions which are due to Sir Eric's log being brief in this section. From Dadianzi right through to Zhouzhi the paths are generally similar apart from two obvious divergences. The first occurs on the track between Huayang and Foping where Teichman and his ponies took a different track from that listed by Zhou Zhongqing as the Main Trunk Route between the villages of Cang'er Yan and Huangcao Ping. Teichman mentions this diversion as follows:

“This is a tiring march, practically one long scramble up and down the mountains all the way, by very bad tracks much too rough to ride over. The second pass can be avoided by taking an alternative route down one stream and up the other, which is said, however, to be impassable for mules.”

Main Route Places (S to N)	Zhou Place	Teichman Place
Yangxian town (heading north)	洋县城	洋县
Lijia Village	李家村	
Tumen Village	土门	
Guhun Temple	孤魂庙	
Stone Mountain Ridge	石山梁	
Silang (Four Bridegrooms) Village	四郎乡(四郎庙)	
Hujia Wan (Hu Family Bend)	胡家湾	
Chafang Temple	茶坊庙	
Tianjia Village	田家店	
Gulu Mountain Top (going north)	古路山	
Dashan Ridge (to reach)	大山梁	
Pianyanzi (north)	偏岩子	
Fancai Ya	饭菜埡	
Zhiguo Shi (to cross)	支锅石	
Madao Ridge (go along)	马道梁	关一(马道梁)
Tianchi Ridge (to)	天池梁	
Taibai Temple (then descends to)	太白庙	
Shuitian Di (then upstream)	水甜地	
Heisha River Valley (to reach)	黑峡河谷	
Dadianzi (then upstream)	大店子	大店子

The other departure is in the route following the crossing of the Laojun Range. Teichman and his party went down the middle way to Xinkouzi – as described before. Zhou Zhongqing's Main Trunk Route crosses into the West Luo Valley and reaches Zhouzhi via the river that gave the Tangluo Road the second half of its name. The following Table (split at Dadianzi) lists the places provided by Zhou Zhongqing. It also identifies places also listed by Sir Eric Teichman in a third column. In a few

places, there are Teichman places (often passes) that are not mentioned by Zhou but where the route must have gone.

In the lists provided by Zhou Zhongqing, the character 梁 (liang; bridge or ridge) has generally been translated as “pass” or at least as equivalent to it. A “pass” is a “bridge” across a ridge. In the first part of the previous table, the places highlighted in green have not been found using the maps and materials available for this study. There are a large number of places listed in the first section of the route with 20 entries listed for the route to Dadianzi compared with only another 28 from there all the way to Zhouzhi. Perhaps this is an indication of population density. It needs to be recorded that although the identification of the Teichman Pass 1 with Madao Ridge seems reasonable - as Sir Eric’s group would choose a way best for the ponies – there are likely a number of possible ways across the “Little Ox Range”. Despite this, due to the presence of key anchor places including the three Teichman places as well as the Heixia valley, which fit well with the description by Teichman, the Teichman and Zhou tracks have been identified to Dadianzi. Since this section of the route is probably the most accessible, in the future it will certainly be the easiest to investigate on the ground with GPS. But since the description provided by Teichman in this section of his route is so brief, the precise path he took may never be completely known.

Main Route Places (S to N)	Zhou Place	Teichman Place
Luoja Tan	罗家滩	
Ban Bridge	板桥	
Heixia Village	黑峡街	黑峡街
Wujian Fang	五间房	
Zhoujia Village (to reach)	周家庄	
Bai Temple (to climb and cross)	白庙子	
Da Niu (Great Ox) Range	大牛岭	关二(牛岭)
Niuling Gully (north pass)	牛岭沟	
Little Huayang (to reach)	小华阳	
Huayang Township (go north)	华阳镇	华阳镇
Xian	县坝	
Ban Bridge	板桥	
Duangong Waters (to reach)	端公坝	
		关三
		核桃坝
Cang'er Yan (going north pass)	擦耳崖	[alt]
Lianghe Entrance	两河口	[alt]
Shanshu Flat (climbing mountain to pass over ridge)	杉树坪	[alt]
Landianzi Pass (descend to)	烂店子梁	[alt]
Huangcao Flat (descend 40 Li through Diaogou gully to reach)	荒草坪	荒草坪
		关六(财神岭)
Dudu River (head northeast pass through)	都督河	旧佛坪
		关七(秦岭)
Jiugou (Nine gulleys) Entrance	九沟口	厚畛子

		关八
Damang River	大蟒河	大蟒河
Yinjia Flat (climb over)	殷家坪	关九
		称沟湾
Laojun Range (descend mountain to pass)	老君岭	关十(老君岭)
Anzi Gully	案子沟	[alt]
Maocao Flat	茅草坪	[alt]
Qili (Seven Li) Pass (to exit by)	七里关	[alt]
Xiluo (West Luo) Ravine (cross flat country 30 Li northeast)	西骆峪	[alt]
Zhouzhi City	周至县城	周至县

After Dadianzi, the possible routes start to reduce significantly as the terrain becomes more mountainous. In this second Table, the (far fewer) places not yet identified on maps are marked in **yellow**. Sections of the road where the main track and Teichman's route are known to diverge are indicated in the Teichman column by [alt] for "alternate track". Otherwise, the identity of the routes is clear although some places mentioned by Teichman are not mentioned in the list of places in Zhou (2008). These are indicated by only occurring in the Teichman column.

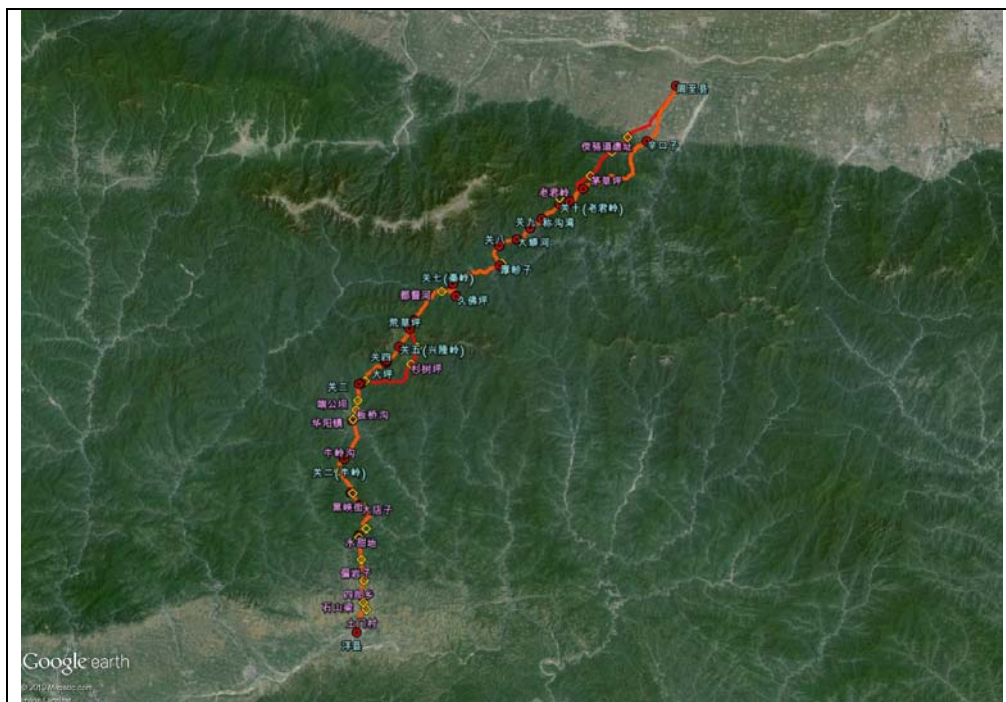


Figure 13: Zhou Zhongqing's Main Trunk Route (red) and Sir Eric Teichman's route (orange) with both sets of waypoints. They differ only in two sections.

In some cases, it is possible that places mentioned by Zhou Zhongqing may be local geographic or cultural features and not separate villages and were possibly not of great interest to Sir Eric Teichman. For example, Temples (eg 茶坊庙, 太白庙, 白庙子; Chafang Miao, Taibai Miao and Bai Miaozi or "the White Temple") may simply be local temples associated with other listed places. Also, 板桥 (Ban Qiao) may simply be a "wooden bridge" on the track, and so on. It would be better if some of these aspects could be established and resolved on the ground.

In his book on Shu Roads (Li *et al.*, 1986), Li Zhiqin describes the fierce terrain of the Tangluo Road and among these he notes (going south): “After passing the main backbone of the Qinling at the Xinglong Range, near the boundary marker of Yang Zhou, there is the famously rugged and dangerous Bashisi Pan (84 bends)⁴ that extends for 80 Li (32 km). Not only is it said: “cut rails in the air, dangerous trestles stretch away” but also here are to be found places with names such as “Naodong” and “Hades Gate”, dotted through with patches of poisonous plants inhabited by [fierce] animals. Travellers all feared passing through these places”. It is likely that this section of the route is well represented by the loop of the Main Route in red north of Huayang shown in Figure 13 which Teichman was led to avoid because it would have been unsuitable for the ponies.

Despite the remaining questions and conjectures, in the current presentation, the Teichman track is taken to be primarily the same as the main route described by Zhou Zhongqing with the two alternate paths being added using the combined set of materials and methods described before. The result is displayed in GE as shown in the image in Figure 13. The names shown at the waypoints are currently Chinese Characters but the Pinyin name and comments in English are available in the information boxes by clicking on a waypoint. Later, a version with the Pinyin Names displayed will also be provided.

Alternative Routes in the Tangluo Road Network

Zhou Zhongqing (Zhou, 2008) also lists a number of alternative tracks that, together with his Main Trunk Route, make up sections of his proposed paths in the Tangluo road network. These are not described in as much detail as was the case for the main route as they were generally easier to establish. Instead, they will be presented using a set of Google Earth images on the same base as the one above. In the presentation they can be selected as “on” or “off” and are named in a way that provides their end points and given the codes A1-A8. The images below are easy to recreate in Google Earth using the present version of the presentation which can be downloaded [HERE](#).

⁴ Zhou (2008) quotes a poem by Tang Yuan Zhen which refers to what is likely to be this place but says there were 48 bends. Perhaps 48 are already more than enough!

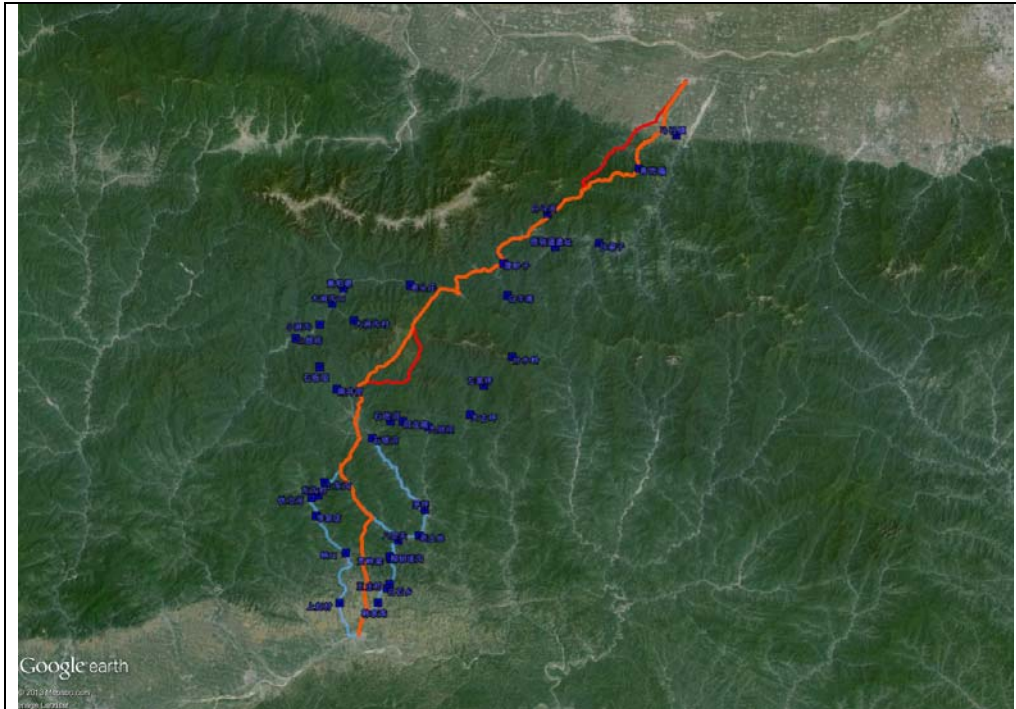


Figure 14: Zhou Zhongqing’s alternative route places (dark blue) and three alternatives for the route from Yangxian Huayang in light blue (A1, A2 and A6). Teichman route (orange) and Main Trunk Route (red) shown for reference.

The first set of three are labelled A1, A2 and A6 in the presentation and are shown in Figure 14. The first (A1) is an alternative route from Yangxian to Dadianzi via the Bali Gate and the Heixia valley. It is less direct than the main route but possibly less hilly. It is included in the 1800-1820 Qing period map of Yan Ruyi. The second (A2) is an alternative route to Zhoujiazhuang (just north of Dadianzi) via the upper reaches of the Tang River (the river that gave the Tangluo Road the first half of its name). The third (A6) is an alternative that first goes to Bali Gate and then goes upstream along the Youshui River via Maoping to Huayang. This alternative is mentioned by others and is shown in the Qing Period map. It is also the present day main road between Yangxian and Huayang. These routes are shown in light blue in these images. The places from the main route and Teichman’s route are turned off but the tracks are left on for context. The dark blue place marks are the places described by Zhou Zhongqing along the alternative routes.

As Zhou Zhongqing and Yan Ruyi both note, Huayang is a central place at the southern entrance to the region of high mountains. Huayang must be passed by almost all people travelling this way in former years. The first three alternatives described above (A1, A2 and A6) represent different ways to get to Huayang from Yangxian. From Huayang (or close to it) there are four alternative paths to the Main Route that go generally north in the presentation. These are shown in Figure 15.

Two (A3 and A4) were provided by Zhou Zhongqing. The first (A3) goes north and west of Huayang across the mountains to the Xu River Valley near Huangbo Yuan. The Xu River enters the Han River near Chenggu and its valley extends almost to the main watershed boundary of the Qinling that separates the Yangtze and Yellow River catchments. Since it stays lower than surrounding terrain and supports settlements, it most likely provided safer and more comfortable travelling – but it is a much longer

route. The second (A4) goes to the east and then north from just south of Huayang. It also moves out of the catchment of the Youshui River into the upper catchment area of the Jinshui (Golden waters) River. The Jinshui River is a separate major tributary of the Han from the Youshui. The alternative route then crosses the main Qinling divide and meets the Main Tangluo Road route at Houzhenzi in Zhouzhi County. Houzhenzi is in the upper reaches of the Black River. This route is not as mountainous as the main route. However, it does not seem to have had many settlements or suitable places for local agriculture where travellers could rest and be fed and it is again a much longer route than the main one.



Figure 15: Zhou Zhongqing's alternative route places (dark blue) and four alternatives for the route from Huayang to Foping and Houzhenzi in light blue (A3, A4, A5 and A7). Teichman route (orange) and Main Trunk Route (red) shown for reference.

The other two routes (A7 and A5) in Figure 15 were added from the Qing period map. The Qing period map did not show a link across the two high passes at the Xinglong and Caishen ranges on the Main Route. It is possible the road was in poor repair in these high areas at the time the map was drawn. Instead, from Huangcao Ping a route was shown through the mountains to the Xu River Valley. This route is clear from other maps and in Google Earth as a viable alternative linking road so it has been added (A7). The other (A5) alternative shown in Figure 15 was a link shown between Foping and the alternative route A3 described previously. These were possibly the only routes open when the high passes closed in winter and would have been important when the magistrates at Foping Ting were surviving the winter.

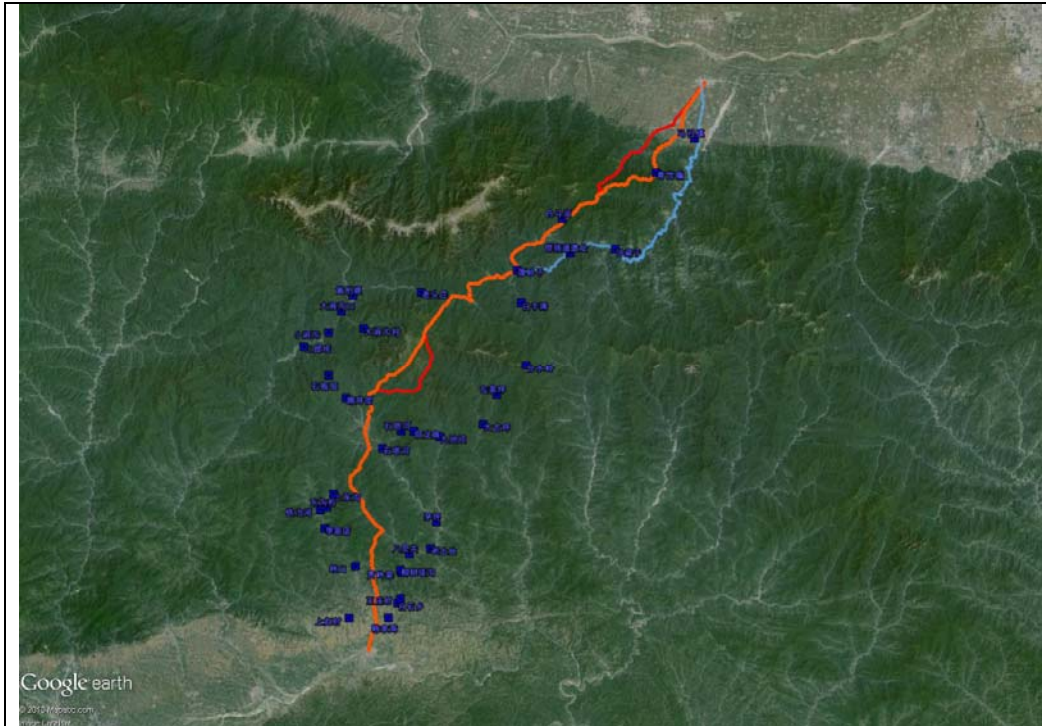


Figure 16: Zhou Zhongqing's alternative route places (dark blue) a final alternative for the route from Houzhenzi along the Black River in light blue (A8). Teichman route (orange) and Main Trunk Route (red) shown for reference.

The final alternative route (A8) is from near Houzhenzi down to Zhouzhi via the Black River valley. It is shown in Figure 16. This route is also present on the Qing period map as a current and active track. It seems logical for it to be an optional route and it is also the route of the present main Provincial Highway G108 from Zhouzhi to where a minor road turns off to Houzhenzi. The present road continues on south from there, well away from the ancient Tangluo Road, through the present county seat of Foping to the Han Valley near where the ancient Ziwu Road reached the Han. It is possible that between Houzhenzi and the main branch of the Black River the terrain is very steep and gorges deep so that people preferred to use other alternative tracks. Only field work and opinions of people who have visited the places can fully resolve such questions. But by incorporating this alternative, the three routes to Zhouzhi from the Laojun Range shown in the Qing period map are now all included in the presentation.

With the addition of these alternative routes, the current draft presentation of the Tangluo Road Network is complete. The map seems to have been taken as far as it is possible to take it without comprehensive ground survey and inputs from people who have been on the ground to the places in question – preferably with GPS.

Consistency of the routes with other sources

Returning to the description by Prof. Li Zhiqin in Li *et al.* (1986) for the Tangluo Route from Chang'an to Hanzhong we can observe:

“The route for this road is as follows: South-west from Chang’an, via Huxian west to Zhouzhi Xian, turning south-west for 30 Li (12 km)⁵ through the West Luo Valley mouth to enter the mountains. It then passes the Luo Valley Gate, through the upper reaches of the Black River tributary, the Chenjia River, to reach the Laojun Pass. It then follows the Badou River and the Damang River Valley, to reach Houzhen near the western source of the Black River. After that it crosses the Qinling main ridge to reach the source of the Han River tributary, the Xushui River, at Dudu Gate. It then goes to the south west over the Xinglong pass, which is even higher than the Qinling water divide. There it enters the upper reaches of the Youshui river valley to reach Huayang Zhen in Yangxian District. From Huayang Zhen you can go south-east along the Youshui River to Maoping, through Bali Pass, then changing direction to the south west go across the Guanling Pass to reach Baishi Yi, and exit by the Tang River Valley⁶. Alternatively, you can go south west from Huayang Zhen, to cross the Niuling pass and exit by the Tang River valley, from whence after 30 Li (12 km) you reach Yangxian.”

Looking back over the lists of places that have been used in the presentation, it is clear that the route nominated by Prof. Li from Zhouzhi to the Laojun range along the Luo River is the same as the one listed by Zhou Zhongqing for his Main Trunk Road. From the Laojun Range to Huayang, Li Zhiqin’s route continues the same as Zhou Zhongqing’s. The “Luo Valley Gate” may be close to Teichman’s “Wadianzi” and a place with this name can still be found here near Yinjia Ping. The Badou River waypoint is especially useful as it is mentioned in other texts and has been added to the set of alternative waypoints in the presentation. From Huayang to Yangxian Prof. Li Zhiqin nominates two alternative routes; one is the same as Zhou Zhongqing’s Youshui alternative that goes via Maoping and Bali Pass and the other seems to be the same as the one used by Teichman going across the Ox Range. They both end near the “Tang River Valley” by which it seems is meant the entrance to the Tang River which is near Tumen Village.

A more technical and statistical study is being prepared for Teichman’s altitudes and Stage distances in relation to the final map. This document should be accessed to investigate the alignments of altitude and distance in detail. However, it is useful here to look at the overall alignment of the distances between different accounts.

	Teichman	GE	HZ Gazetteer
Yangxian to Huayang	130	132	170
Huayang to Houzhenzi	185	171	280
Houzhenzi to Zhouzhi	170	148	240
TOTALS	485	452	690

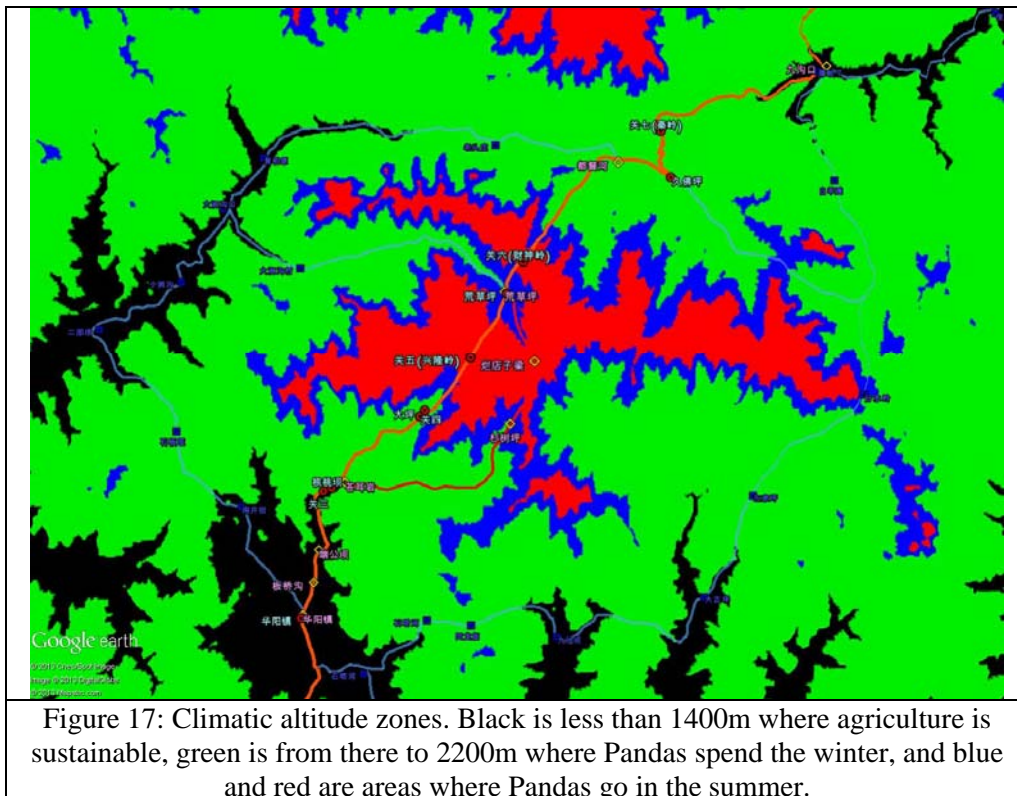
The overall estimates of distance from Yangxian to Zhouzhi in Chinese Li were 485 Li by Teichman and 452 Li from the GE presentation. These can be compared using the total length of 765 Li given by Prof Li Zhiqin for the Tangluo Route from Hanzhong to Xi’an. An estimate for the distance between Hanzhong and Yangxian of

⁵ To estimate distances in Km, the Chinese Li is taken as 400m but it may be less in the mountains.

⁶ The “Tang River Valley” reference must be to the Tang River gorge where there is now a dam and below. This is close to the end of both routes. Confusingly, the alternative route given by Zhou (2008) via the “Tang River Valley” goes via the upper reaches of the river and avoids the gorge.

135 Li was provided by Teichman. An approximate estimate for the distance from Xi'an to Zhouzhi can be simply estimated from Google Earth (as the terrain is quite flat) as about 172 Li giving the distance between Yangxian and Zhouzhi to be approximately 458 Li. In Zhou (2008), Zhou Zhongqing writes: "The complete journey was 480 Li and it could be covered in 4 days". These distances are all close and consistent with the Teichman estimate and the GE estimate is only a little (30 Li) shorter.

The consistency between the modern estimates is in contrast to those provided 100 years earlier in the 1813 "Hanzhong Gazetteer" (Yan and Zheng, 1813). The Table above also lists the estimated distances for the named stages as given in the "Hanzhong Gazetteer" as a third column and compares them with those provided by Teichman and those obtained using the scaled GE distances as above. The estimates of the distances from the 1813 Gazetteer are well above either of the more recent estimates⁷. It seems modern authorities such as Li Zhiqin, Sir Eric Teichman and the GE presentation are consistent in distances and used considerably improved estimates compared with older sources.



However, Zhou Zhongqing suggests that it took 4 days to travel this route while Teichman and his party took 8. It could be claimed that this was because the ponies were not suited to the terrain and so it took longer, but it is more likely that Zhou Zhongqing made an error. This is likely as his estimate implies travelling on average 120 Li per day! Taking 8 days and averaging 60 Li per day seems much more likely in

⁷ Curiously, Zhou (2008) quotes Yan Ruyi's later study for the Qing Three Provinces map as making the Huayang garrison 270 Li from Hanzhong. Using Teichman's estimates for the distance between Hanzhong and Yangxian this means Huayang was 135 Li from Yangxian which is fully consistent with the recent estimates. Perhaps they were being revised between 1813 and 1820.

the harsh terrain and is consistent with the stages listed in a Web Blog item that will be discussed later.

Another form of consistency can be found in information arising in the context of environmental ecology. In Section 5 of this document, we will look at the wildlife of this area. Amongst these is the Giant Panda. Based on information in Pan Wenshi's book (Pan 1986), the Panda have a climatic and altitude zonation in their habitat. Below 1400m the land is arable and it is here that people have put pressure on Pandas. At about 1800m, there is a change in vegetation and in the species of predominant bamboo. In the lower areas the main species is *Bashania fargesii* and in the higher area it is displaced by *Fargesia spathacea*. In summer, Pandas move to above 2400m to feed on the *Fargesia* bamboo and stay below this line in the winter as the high areas are climatically unsuitable but the lower areas still have the *Bashania* bamboo to eat. Figure 17 shows zones at 1400m, 2200m and 2400m levels and also plots the Tangluo Road network:

The areas below 1400m are black, so Huayang on the lower left is in this zone at the top of a connected area of the lowest zone which goes to the Han River. On the upper left is a long stretch of low area along the Xushui River. It reaches almost to the old site of Foping. On the top right, the black zone corresponds to the upper reaches of the Black River to as far as Houzhenzi where there is agriculture. The green areas are above the level of productive agriculture (1400m) but where, in winter and on the southern slopes, the climate is still suitable for Pandas and presumably for people. It is where the *Bashania* bamboo predominates. The blue and red areas are above 2200m and red is above 2400m so that blue is a transition area and red is an area where Pandas certainly do not go in winter but only move into it during summer. It is fairly certain that the red areas are closed to humans in the winter as well.

The main route and Teichman's route both pass through the red zone where the two high passes over the Caishen and Xinglong Ranges are to be found as is the pass over the Landianzi Range on the section of the Main Trunk route that was unsuitable for ponies. It is no accident that Teichman's party passed through in May. Of equal significance is that almost all of the alternative routes are in the green or black zones. They seem to be the winter roads as well as alternative roads. During the time that the magistrates in Foping were isolated from the garrison at Huayang, the winter roads were the only way that the garrison could have gone to their support if trouble arrived or bring in supplies when they ran short. This will become clearer in later Sections of this document.

In a recent Web Blog (<http://tieba.baidu.com/p/375985852>), the contributors discuss suitable hiking stages across the Tangluo Road and list possible routes using modern place names. Their contributions are consistent with various combinations of sections from the Main and Alternative routes provided here. One of the contributions seems especially well informed. The first part of the Blog consists of a route that is essentially identical with the Main Trunk route listed by Zhou Zhongqing (2008). But the second part of the contribution presents a different summary of what seems to be a suggested hike from near Zhouzhi to the Tang River gorge entrance, just north of Yangxian, where there is a dam. The text is translated below and the Chinese text is included as Endnote [1]. This route also provides information on stopovers and access

by bus. It may be the most accessible and best provisioned route for modern travellers and therefore of special interest.

The route starts at the West Luo Ravine to the west of Zhouzhi:

“Detailed Route (“end of stage” is an overnight stay):

1. Luoyu Kou --- Longwo --- Da Shiweng --- Nianzi Ping --- Yingyazi Zhandao --- Kuangchang --- Maocao Ping --- Bajie Shi --- Wudao Hekou --- Guanping Ridge Pass (2400m) --- Chenjia He [end of Stage].
2. Chenjia Gou --- Guanchengzi --- Laojun Ling Pass (2557m) --- Luoyang Gong (where Empress Yin⁸ became a nun) --- Badou He [end of stage].
3. Badou He --- Maichang (Yulan Wang) --- Top of main Range --- Machizi --- Kafang Ridge Pass (1870m) --- Yinjiaping (Empress Yin Temple) --- Damang He --- Laochang --- Fuzi Range Pass (1585m) --- Jiugou Kou --- Houzhenzi [end of Stage].
4. Houzhenzi --- Shaba --- Diaoyutai --- Yaopu --- Qinling Pass (2100m) --- Laoxian Cheng --- Dudumen [End of Stage].
5. Dudumen --- 40 Li Diaogou Bamboo Forest Area --- Caishen Ling Pass (2540m) --- Huangcao Ling --- Xinglong Ling Pass (2670m) --- Changqing Wildlife Reserve [end of stage]. (Already have transport to here)
6. Daping (Wildlife) Protection station --- Huayang Zhen (from Daping going south the road starts and you can take a bus) to walk the road a half day is enough (you can also select to rest and reorganise).”

From here the Blog response provides two routes from Huayang Zhen to the dam at the Tang River gorge (very close to Tumen Cun and Shishan Liang) from where buses are apparently available.

“[1] Route 1; stage at Heixia Valley

7. Huayang --- Niuling Mountain --- Heixia (there are many villages to stay at in this vicinity).
8. Heixia --- Baliguan --- Dashu Pass --- Malongcao Peak --- Madao Cun --- Silang Xiang --- Tanghekou (you should make sure you get here in time for the last bus to Xi’an).

[2] Route 2; stage at Bali Guan

7. Huayang --- Niuling Mountain --- Heixia --- Bali Guan [end of stage]
8. Baliguan --- Dashu Pass --- Malongcao Peak --- Madao Cun --- Silang Xiang --- Tanghekou (you should make sure you get here in time for the last bus to Xi’an).”

This route, going south, starts with Zhou Zhongqing’s Main Trunk route to Houzhenzi and Dudumen, then to Huayang it uses Teichman’s route, finally it uses a part of the main trunk route (at that point identical with Teichman’s) and one of the alternatives provided in the Google Earth Presentation to complete the journey. However, it adds some new places, heights at passes and information about stop overs as well as the availability of transport. It seems that there are now roads all the way from Yangxian to Teichman’s “Mule Inn” at Daping. Sir Eric would have appreciated it! It is likely

⁸ Empress Yin (殷梨花) was a country girl who gave the first Emperor of the Later Han (Liu Xiu, 刘秀, 4-57 CE) food when he was escaping Wang Mang's soldiers near Yinjia Ping. He promised to make her Empress but forgot and she became a recluse. She was posthumously made an Empress Consort (Yin Niangniang, 殷娘娘) after sending him a four line poem that made him ashamed of his thoughtlessness. A temple was built at Yinjia Ping.

that reasonable roads also exist along the West Luo River valley and that Houzhenzi can be reached from Zhouzhi via Highway 108. So the main walking area is the central area of high passes and higher mountains. As far as it is possible to gauge, the route is fully consistent with the Google earth presentation.

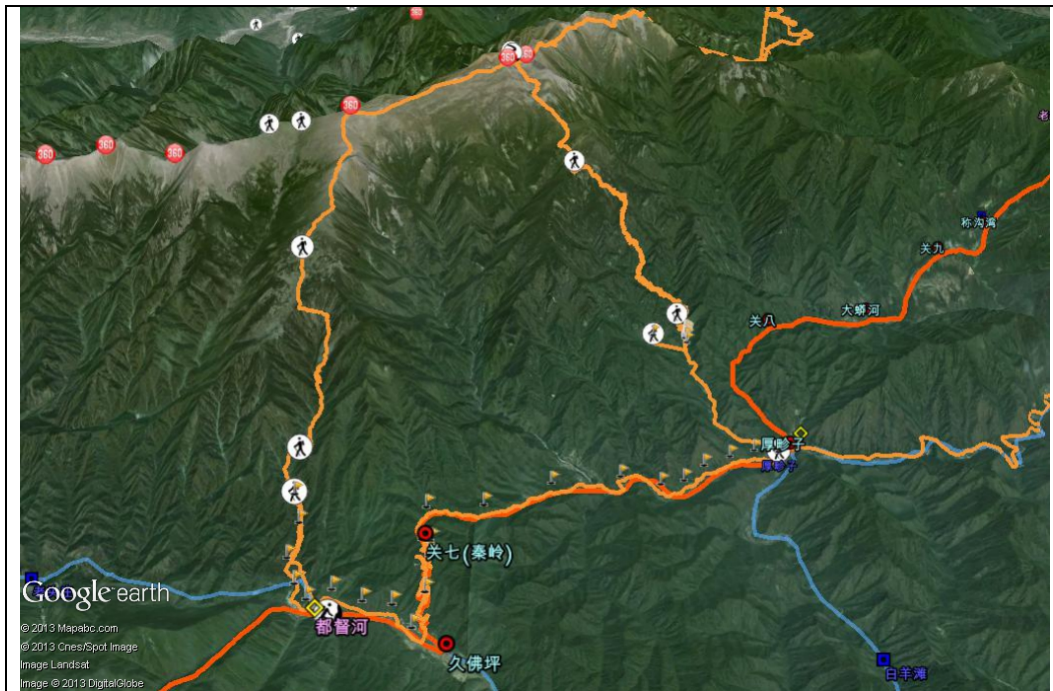


Figure 18: GPS based hiking trails from Houzhenzi via Lao Xiancheng and Taibai Mountain and returning to Houzhenzi. The match with the GE tracks is precise.

Finally, we can provide some additional validation of the estimated tracks from Google Earth and support the above hiking plan by using GPS trails added to Google Earth by hikers between Houzhenzi and Dudu River. If the hiking GPS trails are displayed at the same time as the presentation it is found, at least in this area, that they match well. This is shown in Figure 18 where the light orange tracks with hiker symbols show the walking routes. It seems they came in from the Black River (i.e. from the Provincial Highway 108) to Houzhenzi. They then went in a return cycle along what in the Google Earth presentation is Teichman’s route to Foping (now called Lao Xiancheng) and down the Xu River valley to the Dudu River entrance. They then went up along a ridge to the Taibai mountain area and finally down a second ridge back to Houzhenzi. Between Houzhenzi and the Dudu River the GPS track and the Google Earth presentation are very close! They are also fully consistent with the hiking plan provided by the web Blog participant. Later we will also meet a traveller who seems to have used this route and also taken the “side walk” to Taibai Mountain where he reports there are wonderful relic ancient temples to be found.

3. The Huayang Map

Huayang history

As well as providing descriptions of the routes making up the Tangluo Road network, Zhou Zhongqing (Zhou, 2008) has recounted historical stories of the travels along the road by poets, officials and Emperors in the late Tang period. At that time, the Tangluo Road was an official postal road and had extensive infrastructure, stables, water storages, inns etc. to serve the needs of the travellers. A translation of Zhou Zhongqing's paper provided [HERE](#) and is well worth reading for its interesting accounts of the times. Following on from the Tang period history of the road network, Zhou Zhongqing covers the history of the township of Huayang which lies to the north of Yangxian at the entrance to the main mountain region from the south. Huayang was a central place in the mountain system and for the Tangluo Road since ancient times. In regard to this central place, Zhou Zhongqing, wrote: "Yangxian people going to the Guanzhong, whether they went northwards via Maoping, via Heixia or via Tiehe must all pass through Huayang. Guanzhong people coming south to Yangxian, whether they went via Xinkouzi in Zhouzhi County, via the West Luo Valley, or via Guozhen in Baoji County, or even if they went via the Xie Valley Pass in Qishan County, must all pass through. We can therefore say: Huayang was the vital strategic guardian of the Tangluo Road."

Huayang has had a long history as "strategic guardian" and as early as in the Tang period a garrisoned administrative area called Huayang Xian was at times operative and at others replaced by alternative arrangements. However, after the relatively short period in the late Tang period when the Tangluo Road was a postal road it had much less official attention. In the Qing Period, after the region generally near where the borders of Shaanxi, Sichuan and Hubei meet had been battered by the White Lotus Rebellion (1794-1804), garrisons were established at Huayang and Maoping to improve control of the wild border areas between Yangxian and Zhouzhi. The Huayang garrison with its "Garrison Fort" and a strong earth wall was established in the 6th Jiaqing Year (1801) and in the 7th Jiaqing year (1802) Civilian administration was established at Huayang with the appointment of an assistant magistrate. In 1800, a new "Ting" level administration at Ningshaan had also been established to the east of Huayang and later in 1825, yet another "Ting" level administration was set up in the high mountains at Foping Ting to the north of Huayang. The administrations at Huayang, Ningshaan and Foping were to "sooth the people" for roughly the next 100 years during a time of economic boom that included much of the Han River valley.

After the Xinghai Rebellion of 1912 and the founding of the Republic, there were changes to the administrative system. At this time Huayang ceased to be a Xian, and when Sir Eric Teichman came through in 1917 he made very little of it. At that time, the nearest administrative centre was further north at Foping Ting. According to Zhou (2008), Huayang was briefly reinstated as a Xian in 1922 but this only lasted until 1931 when bandits managed to scare away the last officials. As we will see later, Foping was also over-run by bandits in the years following the time that Sir Eric Teichman travelled the Tangluo Road and no officials went there after 1924. In

modern times, the status of the Huayang township has changed a number of times but it is now a “Zhen” level township and has recently been designated a “Guzhen” (古镇). It is now also an administrative centre for some of the extensive wildlife reserves that now cover the previously wild and unruly mountain region.

Arising from increased economic activity in southern Shaanxi in the late Qing, it seems that the Tangluo Road had once again become a major trade route between south and north. It was probably this increase in traffic that justified the establishment of Foping Ting. We will discuss the “Story of Foping Ting” in more detail in Section 4 of the present document. It seems possible there was more activity on the Tangluo Road network at this time than since the late Tang. If so, a key difference was that during this time very few scholars, writers or poets took the opportunity to travel the hard road! But taking everything into account, it is clear that understanding Huayang and the economic boom of the 19th century is a key to understanding the history of Foping and why Sir Eric Teichman should choose this route to investigate the extent of opium poppy plantings in 1917. For that reason, of the document we will look in greater detail at the early story of Huayang in the rest of this Section.

The Huayang Map of 1813

In the 13th Jiaqing year (1808) of the Qing period, the scholar official Yan Ruyi was appointed as Hanzhong Zhifu (Prefect). While he was at Hanzhong, Yan Ruyi made many contributions to the development of local educational institutions and cultural activities. He also managed the production of the “Hanzhong Gazetteer” (Yan and Zheng, 1813; 严如煜, 《汉中府志》) and was later engaged in a much more extensive mapping activity as part of the Qing government’s desire to gather information to help provide greater security throughout the region. His signature is on the Hanzhong Gazetteer which was printed in 1813 (see Figure 19).

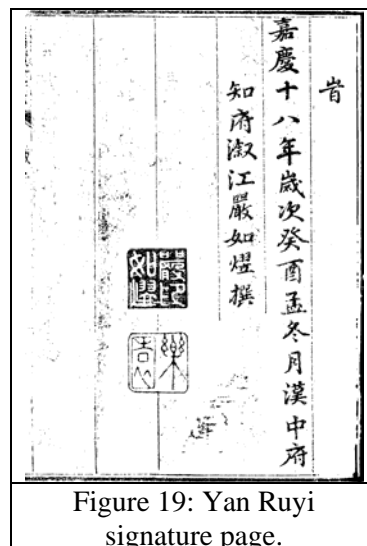


Figure 19: Yan Ruyi signature page.

There are many interesting maps in the Gazetteer, among them being a map of the extent of Huayang administration. By the time of printing, Huayang had been established as a garrison fort for 11 years. An image of the Huayang map is shown in Figure 20.

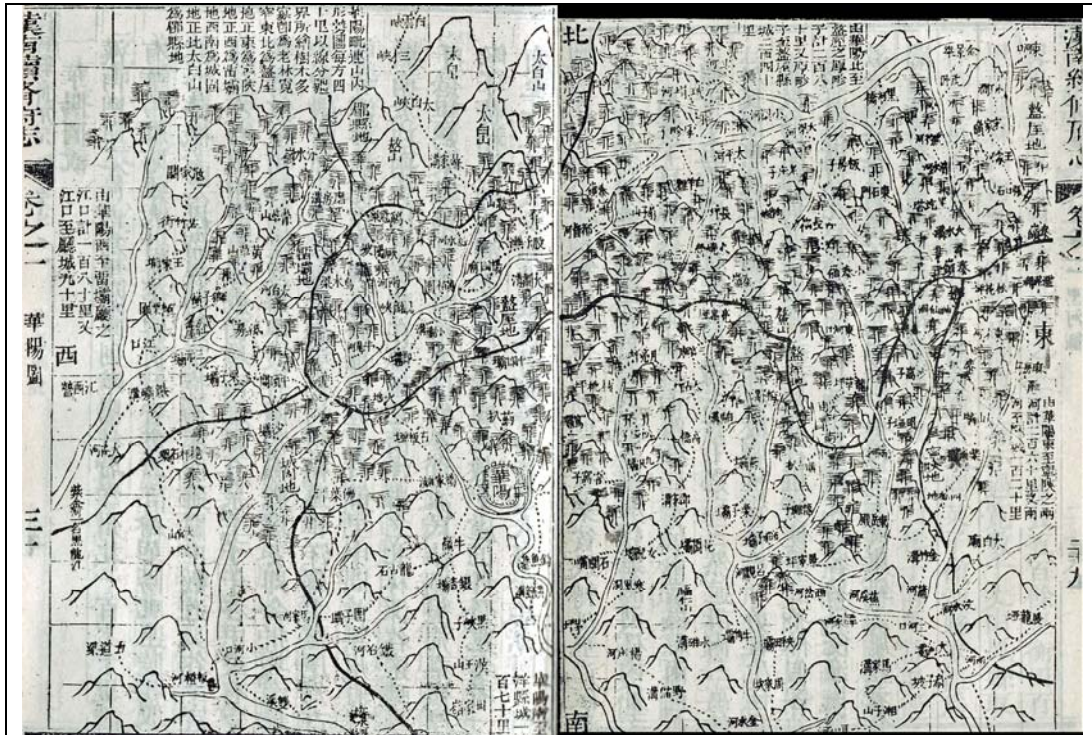


Figure 20: The Huayang County map in the “Hanzhong Gazetteer” of 1813.

The county area of Huayang is in the lower middle area of the map and delineated by a solid black line. To its west is Chenggu; to the east is Ningshaan (which had only been established in 1800, two years before Huayang) and to the north and north-east is Zhouzhi. In the middle of the county is the walled county seat and garrison town of Huayang (華陽; see Figure 21) with roads radiating around it to all places in all directions. To the north and east of the garrison fort is the heavily forested mountain area they wished to secure.



Figure 21: The walled garrison District Seat of Huayang Xian

Explanation of the Map

In addition to a map, the Hanzhong Gazetteer provides an explanation which is shown in its original form in Figure 22. A translation follows in three sub-sections

(numbering added to original text for clarity). The translation and original Chinese are provided as a separate document that can be found [HERE](#).

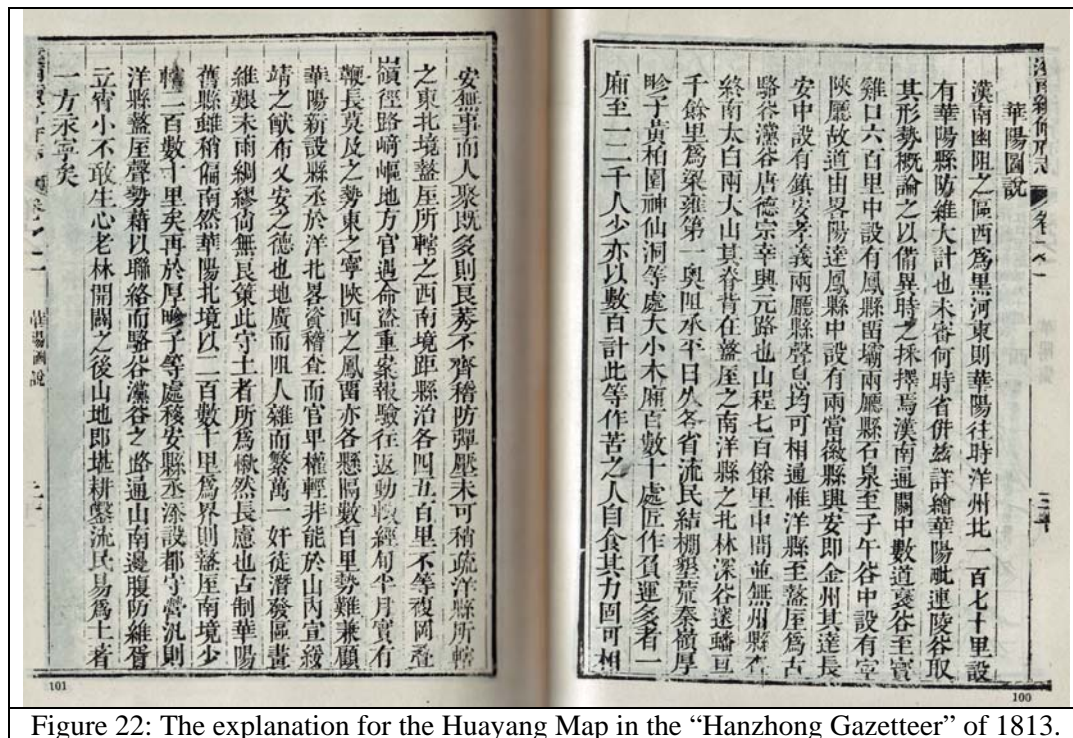


Figure 22: The explanation for the Huayang Map in the “Hanzhong Gazetteer” of 1813.

“Explanation of the Huayang Map:

(i) Huayang lies on the east of the remote [central] barrier region and the Black River on the west. In the past, Huayang was an important strategic Xian located 170 Li to the north of Yangzhou, but in some unknown period it was combined with other places. The map provides a detailed drawing of Huayang and the adjacent hills and valleys, enabling planning in troubled times. Distances for the routes between Han Nan and the Wei Valley are as follows: from the Bao Gorge to the entrance to Baoji is 600 Li, with the path going through the two counties of Feng Xian and Liuba [the Lianyun Road]; from Shiquan to Ziwu Gorge the route goes through Ningshan [the Ziwu Road]; the old road goes through Lüeyang to reach Fengxian, on the way going through Liangdang and Huixian [the Old Road]; from Xing’an (also previously called Jin Zhou) to Chang’an another route goes through the two counties of Zhen’an and Xiaoyi [the Kugu Road]. Altogether these routes enable information to be communicated widely. Only the route between Yangxian and Zhouzhi through the ancient Luo and Tang Gorges, which extends for a distance of more than 700 Li, includes no county level towns. This is the road that Tang Dezong took to “fortunate” Xing Yuan [Hanzhong].

(ii) Examining the region containing the two great mountains of Zhongnan and Taibai, the central range is to the south of Zhouzhi and to the north of Yangxian, having thick forests and deep gorges that wind for more than 1000 Li and forming the main barrier between Liang and Yong. When there has been peace for a long time, people can migrate from other provinces, build huts and till the soil, and settle in towns of the Qinling such as Houzhen Zi, Huangbo Yuan, Shenxian Dong etc. At times there have been more than 100 large and small timber mills, with large ones employing some

1000's of artisans and small ones some hundreds. The hard working people earned their own livings, and were originally able to live together in peace. But when the number of people, some of whom were good and some bad, greatly increased they became without a doubt hard to monitor and control - which was unacceptable. The northeast boundary of Yangxian and the southwest boundary of Zhouzhi have different administrations and are located 400 or 500 Li away from the county seats. In the rugged and complex terrain, it takes a long time for murder or robbery to be reported and dealt with by officials, and it may take 10 days or a half month for someone to attend. These are clearly situations too far from central authority to control.

(iii) In Ningshaan to the east and Fengxian and Liuba to the west, there are also 100s of Li of isolated territory, so that it is very hard to deal with all these places at once. The recently appointed assistant magistrate of Huayang must deal with the northern area of Yangxian and check smuggling, but a magistrate with such little authority has limited ability to carry out the plan to pacify the mountain region, or to maintain peace and good order. The area is a frontier region, but there are still many people. When bad people arise, the management is very difficult. Taking precautions, and creating plans, this is what a defender of the territory must be concerned with. The control exerted by the former Xian at Huayang, although a bit too far to the south, could cover a boundary region of more than 200 Li, so Zhouzhi had over 200 Li less to administer in its southern border area. By setting up other assistant magistrates at places such as Houzhenzi etc, and additionally providing military garrisons with "Dushou" officers, the strengths of Yangxian and Zhouzhi can be combined. In this situation, on the road between the Luo and Tang Gorges and in the Qinling hinterland, with the protection of officials, bandits would not dare to operate. After the old forests have been cleared, and the mountain areas tilled, the people who come can become local natives and build a tranquil region."

This explanation underlines the central position of the Huayang garrison in the mountain area. However, it is significant that there is a note of warning in the third sub-section (sub-section (iii)) where the writer notes that "the control exerted by the former Xian at Huayang, although a bit too far to the south, could cover a boundary region of more than 200 Li, so Zhouzhi had over 200 Li less to administer in its southern border area." Following the time when this was written, the border area was further secured by the establishment of Foping Ting, but that will be dealt with later.

The first sub-section (sub-section (i)) summarises the general state of linkages between north and south Shaanxi. The situation reported in 1813 was very similar to that summarised by Sir Eric Teichman nearly 100 years later in 1917. The main communication roads were to the west from Baoji into the mountains or in the East from Xi'an through to the western end of the Hanzhong Basin. It is significant that there is no mention of the Baoye Road from Meixian through to near Liuba but the Tangluo Road obviously had the interest of both writers. The background to the discussion in sub-section (ii) lies in an earlier time of Qing period history. A good summary of the historical background can be found in a paper by Shi *et al.* (2008, included in Liu *et al.*, 2008) which addresses the boom in water trade that occurred along the Han River during the late Qing. The boom that Zhou (2008) refers to for the Huayang region was in parallel with that along the Han River and most likely sprung from the same causes. Shi *et al.* (2008) write:

“At the beginning of the Qing, the government put in place a policy of reclamation and resettlement by immigration in southern Shaanxi, so that a countless number of refugees moved to southern Shaanxi and Hubei from Huguang, Anhui, Jiangxi and Sichuan to cultivate the land. “Following the 37th and 38th years of the Qianlong Emperor (1772 and 1773), because of the poor harvests in Sichuan and Huguang, people went into the wastes in order to get food and spent their time reclaiming land. Furthermore, because Henan, Jiangxi and Anhui were so poor, many dependants came after them in an endless stream and those who came also cultivated the land.” There were two main consequences of this policy of migration and cultivation; one was that the population of southern Shaanxi increased rapidly, but because the capacity of the land was not sufficient, the population of unemployed labourers also greatly increased. By the first year of the Daoguang Emperor (1821), the population of southern Shaanxi had increased from 490,000 in the first Kangxi year (1661) to 3.84 million, and the population density had increased to 54.7 people per km-sq.”

The problems faced by immigrants in the area where Shaanxi, Sichuan and Hubei meet reached a point of crisis during the reign of the Guangxu Emperor and the White Lotus society was able to harness the growing dissatisfaction to openly rebel against the Qing government in the period (1794-1804). It was a serious problem for the court and Hanzhong was itself occupied by rebels for 3 years. Following suppression of the revolt, government officials seriously attempted to address the base causes of the problems the people faced as well as to secure the region in case of further trouble. These objectives are on display in sub-section (iii) of the explanation for the map. One objective was to increase economic activity and employment and another was to establish the presence of garrisons and administrators in what were previously wild areas “too far from central authority to manage”.

The Map of Four Provinces

At the time the Hanzhong Gazetteer was published, it was probably clear that a garrison at Huayang was still too far from the central spine of the Qinling to fully control the wild border areas around the border area between the new county of Huayang and Zhouzhi. As part of the development of a military strategy for the general region, Yan Ruyi and the skilled cartographer Zheng Bingran also developed maps of the north and south of the Han River for the four adjacent provinces of Gansu, Shaanxi, Sichuan and Hubei. One of the maps produced at this time has previously been used in the present document to sort out some of the routes and places on the Tangluo Road. It was called the “Map of four provinces for the area north of the Han River” (Hanjiang yi Bei Si Sheng bian yutu, 汉江以北四省边舆图). It has been preserved by the US Library of Congress and is available as an image from their website. It has been described by Li Xiaocong (Li, 2004) and some images and information from it can be accessed [HERE](#). A complementary map for the region south of the river does not seem to have been preserved but an associated text with discussions of military assets and future options is available in Yan Ruyi (1822).

Feng Suiping (Feng, 2012) has published a discussion of the contents of the map preserved by the Library of Congress as well as many examples of the literature available concerning its construction and its contents. He estimates that the “Map of

four provinces for the area north of the Han River” was most likely also drawn between 1808 when Yan Ruyi went to Hanzhong and 1813 when the Hanzhong Gazetteer was printed. Li Xiaocong (Li, 2004) estimated it to be drawn between 1800 and 1820 partly based his estimate on the district of Foping not yet being in existence and Ningshan (founded in 1800) being in place. The maps and texts were a major geographical and strategic analysis of the mountain area and occurred in parallel with the collation of material for the “Hanzhong Gazetteer”.

The map of the four provinces certainly seems to incorporate similar information to the map in the “Hanzhong Gazetteer”, but also seems to be arranged somewhat differently with greater generalisation of the rivers to accommodate the density of information it contains. In Figure 23, a sub-image from the Four Provinces map is shown which covers approximately the same area as that displayed in the Huayang Map in the Hanzhong Gazetteer. When the two maps are compared it is reasonable to conclude that they were done at the same time as they use almost all the same places. However, they are arranged differently to take account of the different scales⁹: The Four Provinces map does not show county boundaries but it does indicate status and importance of centres. This and the Huayang Map from the Hanzhong Gazetteer are both useful maps to establish the physical and political geography of the region as it was in 1800-1813.

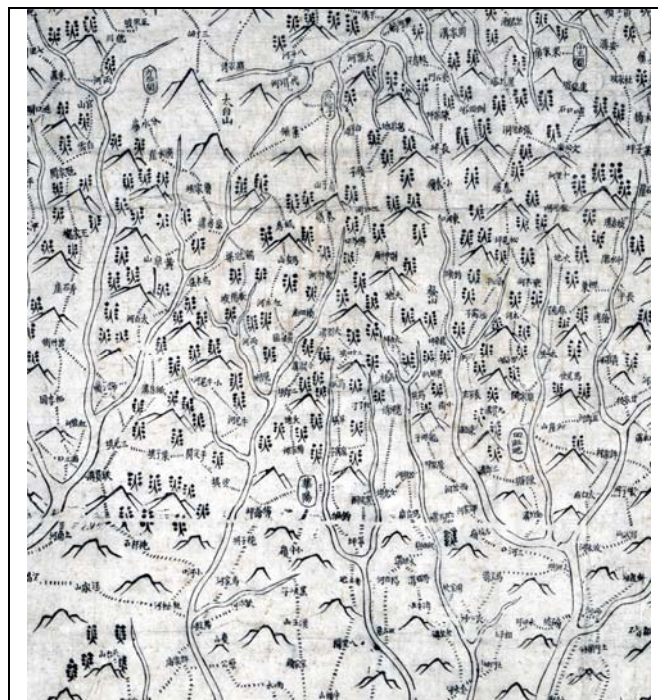


Figure 23: Detail of the extent of the Huayang Map of 1813 in the Map of the Four Provinces.

In Section 4 of this document, the history of the additional administrative area formed to cover the high mountain passes and called Foping Ting is described. It seems clear

⁹ Two places not in the Huayang Map but present in the Map of the Four Provinces are Foye Ping (佛谷坪), a village that became the site of Foping Ting and Yuanjia Zhuang (袁家莊), a village that later became the present day location of Foping. At the time when Foping Ting was formed, Yuanjia Zhuang had been upgraded to be the site of a military Xun. The presence of these places in the strategic planning map is unlikely to be accidental.

that there were discussions before 1820 as to the sufficiency of the administration and defence of the mountain areas and that a new district was planned with plans coming to fruition in 1824. It is likely that the decisions leading to this were based in part on the information gathered by Yan Ruyi and Zheng Bingran and that the Huayang map in the Hanzhong Gazetteer is part of the general collation. The eventual site of Foping Ting, a small village called Foye Ping (佛爷坪) is present on the Map of the Four Provinces – which is no coincidence.

The 100 years of Huayang's mountain administration

When Foping Ting was established it did not have a garrison but only the magistrate and supporting staff. It would seem that the Huayang Garrison was seen to be enough to maintain order and go to the aid of the magistrates if trouble arose. For this to be the case it is likely that the roads had to be improved. We found before that the “Map of four provinces for the area north of the Han River” did not show a road over the two high passes across the Xinglong and Caishen ranges and yet this road was open and part of the main trunk route when Sir Eric Teichman visited later. The efforts of the magistrate and the presence of the Garrison plus any works that were done to improve communications clearly worked well for the 100 years between the time when the new arrangements were first put in place and when Sir Eric reported his journey. It was only after that time, as China slid into chaos and bandits ruled in the wild border regions that the system failed. The magistrates at Foping were murdered in 1924 and none dared return with the district seat moving to the site of the present day Foping. Then, as we find in Zhou (2008), in 1931 bandits over-ran Huayang as well and all trace of effective administration ceased in the high country.

Nevertheless, the preceding century had been one of booming economy and frontier spirit. Zhou Zhongqing (Zhou, 2008) describes Huayang in its good times (1840-1913) as:

“On the main street of Huayang, from its top to its bottom, there were many rows of shops and many and various goods for sale. Whether it was local mountain products, groceries from Sichuan and Guangdong, clothing from the capital or goods for daily use, there was everything anyone could need. From the level of trade and service that existed there we can see that whether one wanted their head shaved, take a bath, gamble, smoke opium, drink tea, drink wine, entertain guests, or put on a banquet, Huayang main street had somewhere to do it. Of the 24 Provinces of pre-Liberation China, Huayang Main Street would usually have people from 21 Provinces actively taking part in its life. From the Inns that catered for travellers to the warehouses that catered for Porters and Pony Teams; from the tailor shops sewing clothes to the smiths making agricultural instruments and shoeing horses; from the shops making soy sauce and vinegar to the rooms cooking corn to make Baijiu etc., with so many trades and professions, there was everything anyone could need.”

Despite such profit and activity, Huayang remained a frontier town with only minimal levels of administration and control. Zhou (2008) finishes his interesting paper with the summary: “it did not matter whether people were intelligent or ignorant, nor matter what accents they had or where they came from, just as long as they were

willing to work hard. In the Huayang Mountain area there was a mixed society, but life could also be comparatively easy.”

Today, Huayang Zhen is still the gateway to the mountains and its history, traditional buildings and relics are being preserved as a “Guzhen” with national support and encouragement. It is also the site of a management centre for important areas of the extensive wilderness and wildlife protection areas that cover much of the area where the Tangluo road network existed in former days. In the future, conservation, wilderness adventure tourism and historical relic preservation may make up a lot of the activity for which the present day Huayang will continue to be well known.

4. The Story of Foping Ting

In Sir Eric Teichman's account of his travels "From Hanchung in the Han Valley across the central Ch'inling Shan to Fenghsiang in the Wei Basin" he describes his travel plan as follows: "*We returned to the Wei Valley by the Fop'ing trail, which debouches on to the plain at Chouchih Hsien*". A modern day westerner reading this might consult a map and find Foping Xian as an important district centre at County level in Hanzhong City area. However, if they assumed that this is where Sir Eric visited they would be mistaken. The present day County of Foping Xian certainly shares tracks of the Tangluo road network with Yangxian and Zhouzhi but the place that Sir Eric visited was located much higher in the mountains in a sheltered but remote valley where the former county seat is now only the main centre in a village group in Houzhenzi Zhen district of Zhouzhi County. In recent times it has become the management centre for the Lao Xiancheng Wildlife Reserve. Sir Eric Teichman wrote of the location of Old Foping: "*This valley, over 6000 feet (1830m) above sea level, is a quarter to half a mile wide, and surrounded on all sides by lofty mountains; it produces wheat, barley, maize, beans, peas, and potatoes, the latter being a most important crop in these mountains and in many parts the staple food of the people. The wheat was just showing above ground in the middle of May when it is ripe for harvest in the Hanzhong plain. This valley appears to be the best and most populous part of the district which is entirely covered by high ranges, including Taibai Shan in the N.W. corner*". Despite its advantages, the story of this remote place on the "Foping Trail" tells of a varied but not always happy history that it is not well known and so is useful to recall here.

The establishment of Foping Ting

The establishment of Foping Ting occurred in the late Qing period at the end of the first quarter of the 19th Century. An account of this activity including references to the most pertinent Fangzhi (local gazetteers) can be found on the web at <http://baike.baidu.com/view/975609.htm>. The un-attributed text seems to have been at least partly written using source material from a publication of the Zhouzhi County Government called "A Cultural Survey of Foping", Chen Yongbo (Ed)¹⁰. Only draft forms of this publication seem to be available from the web. A selection from the description has been translated into English and the Chinese text is available as Endnote [2] of this document. The authors write:

"In the "East China Records of 11 Dynasties"¹¹, which was published in the 23rd Guangxu year (1897) of the Qing dynasty, we find: "In the 4th Daoguang (Yiyou) year [4th Daoguang year was 1824] a Tongzhi Civilian Official and Xunjian Militia

¹⁰ 《佛坪文物概况》陈永波主编，佛坪人民政府。

¹¹ Note by Wang Chunmei: (see <http://baike.baidu.com/view/110496.htm>) This publication covers records from the very beginning of the Qing dynasty to the Tongzhi reign. That is, in Chinese: 天命，崇德，顺治，康熙，雍正，乾隆，嘉庆，道光，咸丰，同治，光绪。 There was another reign in the Qing dynasty, that is 宣统, but the book is mainly by Wang Xianqian (王先谦, 1842-1918), who died in the early years of 宣统 reign. So in 1963, people have added 宣统 as part of the book and re-published it as 十二朝东华录 or "East China Records of 12 Dynasties".

Officials were established at Foping by the Shaanxi government. The Xunjian of Zhenping was later amended to instead establish a township level Xunjian at Yuanjia Zhuang". From "The history of Qing geography", published by the China Bookshop in 1955 we find: "In the 4th Daoguang year (1824), the administrative centre of Foping Ting was established from areas of Yangxian [in Hanzhong Fu] and Zhouzhi Xian in Xi'an Fu". The material used in this book was apparently taken from "The records of Gaozong" [the Qianlong Emperor] and the "Foping Ting Gazetteer". However, the "Foping Ting Gazetteer" states that Foping Ting was established in the 5th Daoguang Year as the "Yiyou" year was properly the 5th Daoguang year [4th Daoguang year being Jiashen and not Yiyou]. Foping Ting was originally Foye Ping and in the "Records of repair to Stele at Confucian and Wenchang Temples" (published in the 18th Daoguang year, 1838) we find: "the Foping Ting government was established 4 years after the present Daoguang Emperor ascended the throne".

Based on what has been recorded in the "Foping Ting Gazetteer", "Sketch of Qing history", "Shaanxi gazetteer of repairs", "The history of Shaanxi geography", "Shaanxi provincial gazetteer: Establishment of administrations" etc, we believe that Foping Ting was fully established in the 5th Daoguang year. In 1986, the Foping Gazetteer office surveyed the original Ting wall and discovered the characters "Foping Ting wall brick manufactured in the 5th Daoguang year" on bricks. We can therefore say that the Foping Ting town was being built in the 5th Daoguang year. Taking everything together, it is possible to conclude that Foping Ting was initially approved by the Imperial Government in the 4th Daoguang year (1824) when the first Tongzhi official Jing Liangceng (景梁曾, 1779-1843) was appointed to make arrangements. Jing Liangceng initiated the construction of the town wall in the 5th Daoguang year and Foping was fully operational as a Ting by the end of the 5th Daoguang year (1825)."

Zhou (2008) writes in his description of Huayang: "It is clear that following the suppression of the White Lotus Rebellion [1796-1805], during the 6th Jiaqing year (1801 CE) the Qing government despatched a garrison commander to Huayang in order to strengthen the administration of the Huayang area. He founded the Huayang Garrison and later built the Garrison Fort. In the 7th Jiaqing year (1802 CE) Huayang was set up as a separate Xian (county), with the appointment of a Xiancheng [Assistant Magistrate] to administer it...". The development of Foping Ting can be seen as more evidence of this general move to increase security and government presence in the Qinling after the scare afforded by the White Lotus Society, The White Lotus rebels had not only occupied Hanzhong for nearly three years but also had at one time crossed the Qinling via the Tangluo road to attempt an attack on Xi'an.

In previous Sections of this document, we have seen how, following the rebuilding and investment that was made in these regions, the upper reaches of the Han River had an economic boom in which Huayang and the mountain regions of the Qinling would have had a considerable share. Zhou (2008) reports that: "Between 1840 and 1949, Huayang also had a ceramics factory and manufactured porcelain. Therefore, in all the years along the Huayang High Street, commerce has flourished and prospered. Among the organised Traders Societies that operated in Huayang, one was the Shanxi Traders Society, specialising in the management and production of mountain products. Another was the Henan Traders Society, specialising in management and production of medicinal herbs, purchasing musk, bear gall, tiger bone etc precious medicinal

herbs in Chinese Medicine. Another was the Sichuan Traders Society specialising in paper and groceries. There was also the Lianghu Traders Society, specialising in cloth, silks and satin. The Guild Halls for the Traders Societies were on the main street and included the Shanxi Guild Hall, the Henan Guild Hall, the Lianghu Guild Hall, the Sichuan Guild Hall etc. The rich merchants of Huayang's main street gradually invested in local commercial activities in Huayang and the nearby mountain areas. At one time, there were Medicine farms growing a variety of medicinal herbs; paper factories using Garcinia and making paper from Mulberry bark, as well as processing the raw materials into various paper products and stationary; and Timber Mills specialising in end processing of various kinds of milled wood for sale. There was also specialised production of Black Mu'er (edible tree fungus), honey, a steel works to manufacture iron and steel, factories for casting iron cooking ware etc etc."

The source for most of these products was the mountain area between Huayang and Houzhenzi, and the Shanxi and Henan traders would have needed to transport their goods north to market. It is reasonable to suppose that because of this, the Foping area was a busy and thriving economy as well as a place where traders would often pass going north and south. It is also possible that during this time the Tanguo Road revisited some of its former glory. Unfortunately, records of this time are limited as few writers and poets seem to have visited as they did in the later Tang, and many of the official records of Foping Ting were lost or destroyed when the seat of government was later hastily moved to various temporary locations before settling at its modern site. We do, however, have the comments made by Sir Eric Teichman when he reached the pass over the Xinglong Range: "*There are additional signs that this trail, now unused except by a few isolated coolies carrying salt into the Han valley, smugglers, and others with good reasons for avoiding the main road, was once a much more important route. It is of course the most direct road from Hsian to Hanchung.*" He also found the ruins of a barrier gate at the pass. All of these were quite possibly relics of the boom of the mid-1800's.

Sir Eric Teichman's Foping

It is clear that the Foping visited by Sir Eric was fully established by the end of 1825 and had been operating as remote administrative centre overseeing local trade and traders for nearly 100 years when he visited. In 1913, the new Republican government had abolished many of the Qing administrative structures, as well as the titles "Zhou" and "Ting". Some of the former sub-prefectures, including Huayang, lost their status as administrative centres. The previous districts that were not rescinded were all henceforth to be called "Xian". So Foping Ting became Foping Xian and it was to Foping Xian that Sir Eric Teichman came in 1917. He was very impressed with the natural resources as well as the hunting and sporting potential of the sheltered valley in which Foping Ting was located in the upper reaches of the Xu River. He wrote: "*When the railway reaches Hanzhong a month in Foping in the autumn with dog and gun will form a pleasant way of spending a holiday*". The farming and herding associated with the presence of the "Ting" were most likely reasons for the abundance of the pheasant he found there. However, musing generally over the nature of the (former) "Ting" grade of district in China, Sir Eric noted:

“The T’ing, usually translated “sub-prefecture” and now abolished, appears formerly to have been always the centre of a sort of military district located in mountainous country for the purpose of holding aboriginal tribesmen of some kind in check. Thus one will find many T’ing on the western confines of Yunnan, Szechuan, and Kansu facing the Tibetans; in the Miaotzu country of Kueichou and adjacent provinces; on the borders of Lololand in Szechuan; on the Burma-Yunnan frontier; and in Northern Shensi on the Mongolian border; but not in provinces like Anhui, Kiangsu, Shantung, etc., which have never contained a non-Chinese population. There are quite a number of T’ing in the Nan Shan of Shensi. But every vestige of an aboriginal non-Chinese population seems to have disappeared, if it ever existed. I have a vague recollection that some European scholar has evolved a theory that the non-Chinese tribes now living in Southern China originated in the mountains of Southern Shensi. Incidentally it may be noted that the former T’ing are usually marked in foreign maps of China as more important places than the Hsien. But with the exception of a few larger places such as Tachienlu and T’engyueh, nine out of ten of the T’ing are miserable little walled villages in the mountains, nowadays ranking as the poorest of third class Hsien.”

Poor and miserable as it was, Foping was still able to organise a generous welcome for Sir Eric and his party. The magistrate had come to meet the travellers at the border between Yang Xian and Foping Xian some 3 hours north of Huayang and escort them to his district seat. They were then well provided for at least until they went beyond the responsibility of Foping into Zhouzhi. But as noted previously, Sir Eric reported that *“The Chinese consider Fop’ing a ‘dreadfully bitter’ place (k’u ti hen)¹², since there is no rice nor pork, nor other desirable food supplies”*. It is likely that this was so for most of Foping’s life in the Xu river valley in the remote Qinling Mountains. Unfortunately, not long after Sir Eric had left for the Wei Valley, life got even more “bitter” for the hardy officials at remote Foping.

The fall of Foping Ting to bandits

A weak point in the choice of site for Foping Ting was that it was often isolated from the military garrison at Huayang by poor weather in the high passes. Moreover, the Xunjian (militia commander) official originally planned for Foping was instead sent to Yuanjia Zhuang (袁家庄) which was well to the east of Foping Ting. This meant that the officials at Foping Ting were sometimes not well protected. Despite this, Foping successfully provided effective local administration for nearly 100 years after it was established and it was still fully functional when Sir Eric Teichman visited.

Unfortunately, after the fall of the Qing, China started to drift into terrible times. Bandits, militias, warlords and warring factions of the revolutionary groups fought over who could unite the country or simply who could profit most from its chaos. In many places the result was not immediate chaos as the Officials who had governed China since the Song Period maintained their activity – albeit without knowing to whom they should answer or report. But as time passed, the situation became much worse. At Foping Ting, well away from the remnant elements of administration and

¹² kǔ de hěn, 苦的很

law, the officials at Foping became very exposed. The account from the web site (based on “A Cultural Survey of Foping” by Chen Yongbo) continues:

“In the early part of the Republic of China (1912), the Qinling mountain region (once again) became an area where opium was produced, and the scourge of banditry in Foping became chronic. At night in 1922, during a freezing time in March, a band of bandits breached the wall and captured two Magistrates one of whom had only that night arrived to take over the administration. The bandits passed out through the Fengle gate¹³ and went. Later, travellers discovered the two magistrates beheaded at Caishen Ling. After this, replacement magistrates never again went to the old location of Foping Xian, and the seals of office were moved from place to place. The old Foping Xiancheng became a bandit stronghold.

In 1924, the Foping magistrate moved the government offices to Yuanjia Zhuang in the Foping Xian district. Most of the residents of Foping’s old Xiancheng also relocated with their herds and animals. After the Foping Xiancheng had moved, the population was decimated as the previously flourishing market town went into decline, and the former Foping Ting “Tingcheng” became a village called “Lao Xiancheng” [Old County Seat]. Between November 1958 and August 1961, Foping’s status as a Xian was revoked, and the area where Lao Xiancheng was located was taken over by Zhouzhi Xian. In August 1961, Lao Xiancheng was returned to Foping Xian. In July 1962, Lao Xiancheng village was assumed into the Houzhenzi people’s commune [once again] under Zhouzhi Xian. After that, Yuanjia Zhuang became the new seat of Foping Xian and it also assumed the name “Foping” from the former Xiancheng. Many people today mistakenly think that Lao Xiancheng village is the Zhouzhi Lao Xiancheng. For example, in the development of the “Zhouzhi Gazetteer”, in regard to Lao Xiancheng originally being Foping, the historical facts were not available, as there was no remaining written account of the modern history of Lao Xiancheng. It seems as if at this point the historical link had been broken.”

The place where the officials and population moved after the murder of Foping’s officials was Yuanjia Zhuang, where the militia originally planned for Foping Ting had been located since 1825 – too far away to help when needed. Eventually, even the name was transferred and now Foping Xian, Foping Xiancheng and Foping Wildlife Protection Area do not include the former site at all and many people do not realise that the original Foping Ting was not originally located at the site of today’s Foping county seat.

The writer of the article claimed that the rise of opium growing (and presumably of cross-mountain traffic transporting it to market) in the Qinling occurred after the start of the Republic in 1913 (民国初年). Sir Eric does not, however, note any of this activity during his visit in 1917. It appears, in fact, that it was only after his visit that

¹³ At the web site (<http://www.cuncunle.com/VillageWeb/562389/Tour/Tour-3235.html>) is an article outlining the relics at Lao Xiancheng Wilderness Area (it does not mention Foping Ting). It lists the three gates of Lao Xiancheng in the Qing period as being the Jingyang (景阳门) gate in the east, the Fengle (丰乐门) gate in the west and the Yanxun (延薰门) gate in the south. The Xu River and mountains provided natural cover in the north.

the situation changed for the worse. Sir Eric was making his journey with the express aim of assessing the effectiveness of China's suppression of the Opium Trade. His report at the time seems to have been very positive. He explained the background briefly in the statement:

“The stimulus exercised by the Treaties with Great Britain of 1907 and 1911, under which the import of Indian opium was to cease if China could succeed in putting her own house in order with regard to cultivation, has of course had a great effect on the good results obtained. It now remains to be seen whether suppression can be maintained after the withdrawal of this foreign stimulus.”

Perhaps not introducing Indian opium at all would have been even better, but given the situation, any attempt to break its hold on Chinese was worth trying. He also wrote:

“The success of China's measures for the suppression of poppy cultivation has been one of the most striking events in her recent history. In 1907 the policy of total suppression within ten years was adopted amidst general scepticism on the part of most foreigners and many Chinese. It was generally felt that this policy would be but another instance of the maxim Yu Ming Wu Shih (Theory but not Practice, yǒuming wúshí, 有名无实), so deeply engrained in Chinese official life. The ten years have now elapsed, and though cultivation may not be completely extinct in wild mountain districts and amongst the semi-independent tribes of the west and south-west, yet one may travel for months through the plains and valleys of provinces such as Szechuan, Shensi, and Kansu, where most of the native opium consumed in North China used to be produced, and never see a single poppy plant.”

Unfortunately, by the time Sir Eric's book went to Press (in 1921) things were rapidly deteriorating. In his Preface (written in 1920) he writes:

“The remarks about the successful suppression of opium cultivation, which reached its high-water mark in 1916 and 1917, contained in Chapter XI unfortunately no longer hold good. At the time of writing the poppy is again being extensively cultivated in the distant provinces of the interior, notably in Shensi and Szechuan, under the open encouragement of the local officials, who derive their principal revenues from the taxation of the opium produced. In the spring of 1919 the writer travelled for days through districts in Western Szechuan, where the cultivation of opium had previously been completely eradicated, without ever being out of sight of the countless fields of red and white poppy in full bloom; the price of opium was everywhere rapidly falling, and the populations of the out of the way cities were again sodden with the drug. This flagrant violation of the country's treaty engagements is not the fault of the Central Government, who continue to do their best to carry out suppression of production and consumption. But the various semi-independent military chiefs in the distant interior care nothing for the orders of the Peking administration or for China's treaty obligations, and aim only at their own enrichment.”

So, it was when opium production returned to China's west that bandits grew bold, destroyed the administration at Foping and forced the new officials, the people and the Foping “name” to move east to Yuanjia Zhuang. In the years that followed, the situation in China only became worse as bandits, warlords and armies turned China

itself into a ‘dreadfully bitter’ place. There was little chance for foreigners to relax at Foping hunting pheasant as was suggested by Sir Eric. We will return to the pheasants and other wildlife, which provide a more cheerful story, in Section 5 of the present document.

Foping’s position in the Tangluo road network

Foping Ting was set up in the early to mid 19th Century partly to address the concerns created by the White Lotus Rebellion and also to administer a booming legitimate trade route in this part of the Qinling Range. The booming trade of the mid-19th Century has been discussed previously in its context for Huayang Zhen (Zhou, 2009). Prior to the founding of Foping Ting, in 1804, when the scholar official Yan Ruyi arrived to take up the post of Prefect of Hanzhong Fu, we know he oversaw the publication of the “Hanzhong Gazetteer” (printed in 1813) with many maps of the Hanzhong Prefecture. He also oversaw the development of maps covering the Qinling area made as part of a general survey of the region. His extent general map, which has previously been used here to sort out alternative routes and tracks of the Tangluo Road, was published as the “Map of the Four Provinces on the North Bank of the Han River”.

A small part of the complete map is displayed in Figure 24. It shows the roads and places as they were in the upper reaches of the Xu River before Foping Ting became an administrative centre:

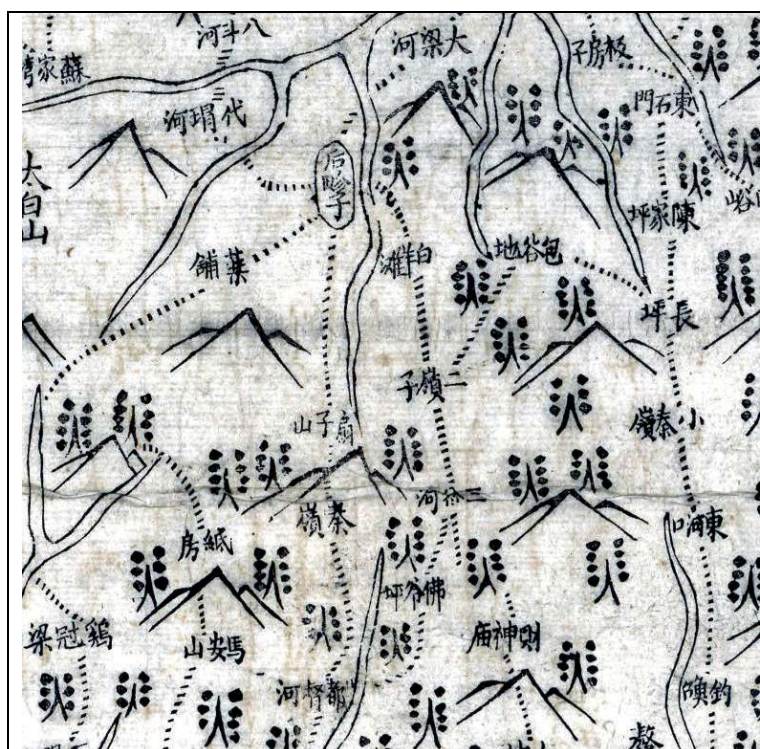


Figure 24: Detail of the upper reaches of the Xu and Black Rivers near the Qinling water divide before 1820.

Reading place names from top to bottom or right to left, we can establish that the major river running north (at the top) is the Black River (黑水). The third track on the

bottom to the left of the image has two branches at Dudu River (都督河) on the way to Houzhenzi (厚畛子). The left hand one goes through Dudu River and Qinling (秦嶺 which is Teichman's Pass 7) and the other goes through Foye Ping (佛爷坪 with present day simplified character for 爷) with both routes going to eventually to Houzhenzi. Foye Ping was the original name of the village that was made the Tingcheng of Foping Ting in 1825. At the time the map was drawn, the biggest and most important township in the area seems to have been at Houzhenzi which is also true today. The character used on the map for "hou" (后) seems to be wrong – judging by other maps prepared by Yan Ruyi, such as those in the "Hanzhong Gazetteer" (漢中志), and assuming it is consistent with modern usage.

In the previous discussions around identifying the tracks of the road network, we noted that the route to Dudu He in this map was via the Xu River and not across the high passes of the Xinglong Ling (興隆嶺, Teichman pass 5) and the Caishen Ling (財神嶺, Teichman pass 6). These passes are very high, being 2658m and 2570m respectively at the pass saddles with Caishen Ling being flanked by mountains reaching to heights above 3000m. It was likely the high passes were often closed in winter. But they must have been in use at other times as Sir Eric used this direct route, finding a relic barrier pass at Xinlong and it was the pass over the Caishen (God of Wealth) Ling where a traveller found the bodies of the murdered officials in 1922. At some time prior to then, the route over the high passes must have been repaired and maintained as the Main trunk Route. The most striking thing about this map is the extent of the network of tracks passing through these areas. It was clearly not a disused network as some have suggested, but it is equally clear that until administrative changes were made in the early 1800's it was not an official road network.

Sir Eric Teichman's use of the Tangluo Road has provided a great deal of useful information about this rugged "smugglers road". It helps tie together information from many sources and it helps put the story of Foping Ting into its rightful place in the recent history of the Qinling Plank Roads to Shu. Today the Old Xiancheng (Lao Xiancheng) at the former site of Foping Ting has become the site of a centre for wildlife conservation in the "Lao Xiancheng Nature Reserve". Western visitors may not be wandering along in the upper valley of the Xu River with dog and gun but rather hiking or biking with backpack and camera whilst enjoying the natural mountain environment and visiting the remaining ancient relics.

5. Wildlife of the Qinling Tangluo Road

Nature Conservation on the Tangluo Road

The high relief and elevation variations of the Qinling range, across which the Tangluo Road takes the most direct route, have made this road possibly the “hardest” of all the Shu Roads. But the area through which the Tangluo road passes is also one where wildlife abundance and diversity is extremely high. Throughout its history, travellers have noticed its inhabitants (such as the Hua Bear or “Flower” Bear, 花熊, today called the Panda) and in recent times, a set of major nature conservation areas has been formed to preserve this abundance. The routes making up the network of Tangluo roads is largely covered now by the Foping, Changqing, Lao Xiancheng and Zhouzhi Nature Conservation Parks. The route Sir Eric Teichman took passed through the Changqing, Lao Xiancheng and Zhouzhi Parks. As we have seen, the former district centre of Foping Ting was at the site of the present day township of Lao Xiancheng (the “Old County Seat” township).

Sir Eric Teichman’s view of the wildlife on the Foping trail

After they left Huayang, the last significant township before they reached the Wei River Valley, Sir Eric and his party proceeded by the upper reaches of the Youshui River to Daping. At this point they were 60 Li from Huayang. From here they went deep into the present day Changqing Nature Reserve. The next day they climbed to the top of the Xinglong Ling Pass where Sir Eric noted the presence of interesting wild life. He wrote:

“From the summit of the pass (9000 feet) there is a fine view to the north towards T’aipai Shan (12,000 feet), which appears as a rocky ridge sprinkled with snow, with a lower range in the immediate foreground over which the path leads to Fop’ing. All around are forest-clad ranges, uninhabited, and abounding in big game, deer, bear, pig, leopard, goral, and takin; but owing to the nature of the country their pursuit would involve great difficulties and hardships.”

After crossing the high pass, the scenery changed and as they got closer to Foping. Sir Eric wrote:

“From the pass there is an easy descent through another flat open valley, where we saw some silver pheasants (or perhaps they should be referred to as blood pheasants, a species of Ithagenes), into the valley of a stream flowing west, where there is some cultivation, as usual mostly potatoes, and some huts, called Huangts’ao P’ing; these valleys are less thickly wooded than those on the southern side of the pass.”

Foping was situated in a protected high valley on the headwaters of the Xushui River where the climate was less severe than in the mountains. At Foping, they had yet to cross the main Qinling Divide into the watershed of the Yellow (Huang) River and

were still on the southern slopes. Sir Eric's opinion of Foping as being "dreadfully bitter" has been noted before, but he found some things he liked, adding:

"... but to the foreigner the abundance of game, bracing healthy climate, and magnificent mountain scenery combine to make it a delightful spot. When the railway reaches Hanchung a month in Fop'ing in the autumn with dog and gun will form a pleasant way of spending a holiday."

Even if they were possible at that time, such "delightful" vacations certainly cannot be experienced now, as the former site of Foping, now called Lao Xiancheng, is the administrative centre of the Lao Xiancheng Wildlife Protection Reserve. The big game and blood pheasants are safe! But at the time Sir Eric visited it was not so. He wrote:

"The cultivated fields round the city and the brush-covered hills to the south abound in pheasants, and I shot a good many cocks, which in spite of the season were excellent eating and a welcome addition to our food supplies. I have shot a great many cock pheasants in the highlands of Shensi and Kansu in the summer for food, as the parts where supplies are scarce and pheasants abundant always seem to coincide. The game-exporting companies have not yet extended their activities to these parts, which provide probably the best wild pheasant shooting in the world. The pheasants usually met with are the usual Mongolian ring-necked species, with the white ring growing less and less as one goes west till it dies out altogether in the mountains of the Kokonor border. These birds literally swarm in the corn fields in many of the cultivated valleys in the mountains of the North West and must consume a great deal of grain. While we were routing out pheasants on these hills we put up four deer, apparently a large kind of roe, which showed very little alarm and kept on reappearing at intervals for the rest of the afternoon."

After this, the party moved on quickly to reach Zhouzhi and there is no further mention of pheasants.

Wildlife Conservation in the Tangluo road area of the Qinling

But there is much more to the wildlife of the Qinling than was noticed by Sir Eric. In the comprehensive book edited by Pan Wenshi (Pan, 1988), outlining the ecology of the Qinling Panda, the writers also outline the basis for the ecological diversity of the Qinling wildlife. They wrote (for Chinese text, see Endnote [3]):

"As previously described, the land based vertebrate animals of the Qinling are extremely diverse and plentiful. The known animals and beasts, birds and amphibians of the Qinling region have been compiled into a summary, which lists the geographic distributions and inter-relationships for each animal, and from this [Table from the book not included here] it is possible to appreciate the scale of diversity found there. Among the vertebrates, it is useful to give particular attention to the animals' habitats and distribution, because their activities occur in major zones, which are useful to know as they help us understand how the Giant Panda survived on the southern slopes of the Qinling.

In analysing the history of animal associations in the Qinling, Chen Fuguan and others (1986) have suggested that the zonal distribution of species from north to south within the extent of the northern Euro-Siberian region [a region of the Palearctic Ecozone] is:

- The China-North East region: extends south from Siberia and China’s Northeast and includes the north China plain;
- The Central Asian region: extends from the northwest to include Xinjiang and stretches into Gansu;
- The Qinghai-Tibet region: extends from the northwest and into the Qinghai-Tibet plateau.

Within the Indomalaya Ecozone, animals of the Oriental China-Mianma species group [the Indochina ecological region] are distributed from south to north. Consequently, the Qinling mountain area is a place where all of the ecozones meet. This fully explains the complexity and diversity of animal species associations found in the Qinling.”

The writers then go on to list the species they had found to be in the Qinling area and which had a high grade of National protection by law in 1988. They are described in three groups and while it is possible if the table were compiled today it may be a little different, it is still of great value as an indication of the protected and endangered species that have been known to occur in recent times on the south slopes of the Qinling. In addition to the information provided in Pan (1988), the International Union for Conservation of Nature (IUCN) species Red List classification (<http://www.iucn.org/>) has been added as well as the most common western name for the animal in English. Otherwise the three tables are as presented in Pan (1988).

Briefly, the IUCN codes used are:

IUCN code	Chinese code	Interpretation
LC	无危	Least Concern
NT	近危	Near Threatened
VU	易危	Vulnerable
EN	濒危	Endangered
CR	极危	Critically Endangered
EW	野外灭绝	Extinct in the wild
EX	灭绝	Extinct

The three categories CR, EN and VU can be grouped to indicate species that are referred to generally as “Threatened”. It is almost certainly too late for improvement in the situation of EW and EX so the “Threatened” species are the ones requiring the most immediate attention and protection. In the addition of the IUCN code to the Tables below, the Threatened species have their code highlighted in yellow and the extinct in red. Other species listed here are all still protected by law in China – and will hopefully avoid progression to more concerning categories in the future.

Continuing with the quotation from Pan (1988), the writers note:

“There are 30 types of animal protected by law in Shaanxi Province, of which there are presently 26 types found in the Qinling Mountain range.

In the Class 1 grade of National Nature Protection there are 6 species:

Chinese Name	Scientific Name	Classifier	Common English Name (code)
大熊猫	<i>Ailuropoda melanoleuca (qinlingensis)</i>	David (1869)	Giant Panda (EN)
金丝猴	<i>Rhinopithecus roxelanae</i>	Milne-Edwards (1897)	Golden Snub-nosed Monkey (EN)
羚牛	<i>Budorcas taxicolor</i>	Hodgson (1850)	Takin (Gnu Goat) (VU)
华南虎	<i>Felis tigris amoyensis (Panthera tigris amoyensis?)</i>	Hilzheimer (1905)	South China Tiger (EW)
黑鹳	<i>Ciconia nigra</i>	Linnaeus (1758)	Black Stork (LC)
朱鹮	<i>Nipponia nippon</i>	Temminck (1835)	Asian Crested Ibis (EN)

In the Class 2 grade of National Nature Protection there are 11 species:

Chinese Name	Scientific Name	Classifier	Common English Name (code)
小熊猫	<i>Ailurus fulgens</i>	Cuvier (1825)	Red Panda (VU)
猞猁	<i>Lynx lynx</i>	Linnaeus (1758)	Eurasian Lynx (LC)
金猫	<i>Felis temmincki</i>	Vigors et Horsfield (1827)	Asian Golden Cat (VU)
云豹	<i>Neofelis nebulosa</i>	Griffith (1821)	Clouded Leopard (VU)
豹	<i>Panthera pardus fusca</i>	Meyer (1794)	Indian Leopard (NT)
林麝	<i>Moschus berezovskii</i>	Flerov (1829)	Dwarf Musk Deer (EN)
毛冠鹿	<i>Elaphodus cephalophus</i>	Milne-Edwards (1871)	Tufted Deer (NT)
猕猴	<i>Macaca mulatta</i>	Zimmermann (1780)	Rhesus macaque (NT)
红腹角雉	<i>Tragopan temminckii</i>	Gray (1831)	Temminck's Tragopan Pheasant (LC)
白冠长尾雉	<i>Syrnaticus reevesii</i>	Gray (1829)	Reeve's Pheasant (VU)
大鲵	<i>Megalobatrachus davidianus</i> (pref. modern name <i>Andrias davidianus</i>)	Blanchard (1871)	Chinese Giant Salamander (CR)

In the Class 3 grade of National Nature Protection there are 9 species:

Chinese Name	Scientific Name	Classifier	Common English Name (code)
大灵猫	<i>Viverra zibetha</i>	Linnaeus (1758)	Large Indian civet (NT)
小灵猫	<i>Viverricula indica</i>	Desmarest (1804)	Small Indian civet (LC)
青羊(斑羚)	<i>Naemorhedus goral</i>	Hardwicke (1825)	Himalayan goral (Goral) (NT)
鬃羚	<i>Capricornis sumatraensis milneedwardsi</i>	David	Chinese serow (VU)
岩羊	<i>Pseudois nayaur</i>	Hodgson (1833)	Bharal (Himalayan blue sheep; naur) (LC)
金雕	<i>Aquila chrysaetos daphanea</i>	Linnaeus (1758)	Himalayan Golden Eagle (LC)
血雉	<i>Ithaginis cruentus sinensis</i>	David (1873)	Blood Pheasant (LC)
金鸡(红腹锦鸡)	<i>Chrysolophus pictus</i>	Linnaeus (1758)	Golden Pheasant (LC)
大鸨	<i>Otis tarda</i>	Linnaeus (1758)	Great Bustard (VU)

Amongst these animals are five (5) of China's "Top 10" (中国十大) national treasure species with the Giant Panda (大熊猫) being first in the China list; the Golden snub-nosed monkey (金丝猴) being second; the South China Tiger (华南虎) being fourth; the Asian Crested Ibis (朱鹮) being fifth; and the Black Stork (黑鹳) being eighth. The remaining five of the "Top 10" include the Yangtze Dolphin and the Yangtze Alligator, which would not obviously occur in mountains, and the Pere David Deer which only exists at all today in survivors of a few specimens taken to France in the late 1800's. The final two are the Tibetan Antelope and the Brown Eared Pheasant.

In the lists above are some others mentioned by Sir Eric Teichman such as the Takin which is now endangered and the Blood Pheasant and leopard which are not. Obviously, the lists for such important animal species reinforce the assertion that the Qinling is a place of high conservation value and underlines the critical need for active species preservation. This is certainly underway. For example, north of Yangxian in southern Shaanxi, at the southern end of the ancient Tangluo Road, is the National Grade Asian Ibis (朱鹮) Natural Conservation Area. It was founded in 1981 and has preserved a major wetland breeding ground that has been part of the migratory route of the Ibis for many years. The associated extended migratory bird reserves stretch along the Han River as part of modern preservation of these important areas for all migratory birds.

However, it is the presence of a population of about 200 Giant Panda in the Qinling that has accelerated the growth of a network of Nature Reserves covering the middle sections of the ancient Tangluo Road network. This Panda population is unique and has recently (Wan, 2005) been declared a specific sub-species (*Ailuropoda*

melanoleuca qinlingensis) of the Giant Panda. The extensive study of the Qinling Panda population in the 1980's documented in Pan Wenshi's book was the beginning of modern Panda studies and led the national effort that has today arisen to protect and preserve China's national treasure. The book edited by Pan Wenshi (Pan 1988) has a valuable English language summary comprising translations of Chinese summaries from each of its Chapters. This summary has been extracted, edited and made available for interested people on the Qinling Shu Road website [HERE](#).

In the summary from the first Chapter, the authors write:

“Pandas have had a long history in the Qinling Mountains. Both *A. microta Pei* and *A.m. baconi* appeared there during the early middle Pleistocene Period, about 700,000 years ago. From fossil and historical records it has been shown that pandas lived on both slopes of the Qinling Mountains up to a few thousand years ago. At that time, the pandas quickly vanished from most of their ranges because their habitat had been damaged by people. Though local people and local chronicles indicate that there have been giant pandas, or “Hua Bear” (“Flower Bear”, 花熊) as they are locally known, on the south slope of the Qinling Mountains [for a long time], the first specimen was not collected until 1964. Today, pandas living in the Qinling Mountains are located on the south slope, including six counties and covering about 1650 km². Within this area the pandas live at elevations ranging from 800m to 3100m. There are [were] about 220-240 pandas living there according to calculations done both in the 1970s and the 1980s.”

Later, they summarize the unique situation of the southern slopes of the Qinling as follows:

“Giant Pandas appeared on the Qinling Mountains at the beginning of the middle Pleistocene period and have continued to live there for some 7,000,000 years. These pandas are unique because they are still living on the southern slopes of the mountains, their original range, although other pandas living in their original ranges have generally died out. The ways in which the southern slopes of the Qinling Mountains shelter these pandas are as follows:

(1) The distinctive landform is a climatic screen. The highest sector of the Qinling Mountains topped by Taibai Mountain effectively blocks cold air currents from the north. Even during the last glacial epoch, the snow line on Taibai Mountain, was at about 3350m. The southern slopes of the mountains are gentle and broad, and the South-eastern Monsoon rain can easily reach there along the Hanjiang River. Thus the climate on the southern slopes has generally been warm and wet, allowing the giant pandas to survive through the glacial period.

(2) With this favourable climate, a diversity of vegetation grows quickly on the south slope. The mountains' great range of elevation provides a large variety of vegetation that can be divided vertically into many zones. Among the existing vegetation zones the mid-mountain coniferous-deciduous broadleaf mixed forest (theropencedrymion¹⁴) combined with *Bashania* Bamboo forest and the subalpine dark coniferous combined with *Fargesia* Bamboo forest are both suitable for present day giant pandas. In

¹⁴ Mixed predominantly coniferous forest type mapped commonly in mountain areas of China

addition, the micro-climate resulting from the varied topography causes plants in different locations to be at different phases of their growth at any given time. This is of benefit to the pandas as not all the bamboo blossoms and dies at the same time.

(3) On the southern slopes of the Qinling Mountains, the dividing line between the mountainous warmer temperate zone and the temperate zone is at an elevation of 1400m. For about 2000 years people have periodically cultivated above this line, but they have always moved away because the natural conditions are too unfavourable for long term cultivation. Thus 1400m of elevation is the upper limit of continuous agriculture. People are presently distributed as follows, there are dense populations in the hills and the lower mountainous regions, where the forest has been replaced by farms; there are fewer people (about 2 per sq-km) living on the lower mid-mountain regions; and above 1400m there are no permanent human settlements. Thus people have unconsciously left the region above 1400m to the giant pandas. This factor has favoured the panda's survival especially in the last 200 years.

(4) On the gently sloping southern slopes, the soil is nourishing, the weather is pleasant and therefore vegetation damaged by people recovers quickly. For the above reasons the southern slopes of the Qinling Mountains is a superb natural refuge for the giant panda. It is one of the last natural refuges left to them.”

Where the winter conditions were too harsh for Panda then it is likely they are also too harsh for humans!

Since Pan Weshi's book was written, significant administrative changes have occurred in the area where the remaining Qinling Pandas live. The Taibai and Foping Nature Reserves had been in existence for some time (declared in 1965 and 1978 respectively) when the basic research was carried out in Changqing by Pan Wenshi and others. It was not until 1995 that Changqing became a Giant Panda Conservation Area and forestry ceased. However, before that time it had been a successful shared zone between wildlife protection and forestry and it was only after a change to clear felling threatened the Panda that it became a declared reserve. Zhouzhi Nature Reserve was declared in 1988 and Lao Xiancheng in 1993. For maps and further information about these areas it is useful to consult the paper by Louks *et al.* (2003) and the Thesis by Wang Tiejun (Wang, 2003). The second reference focuses on the Lao Xiancheng Reserve (where Teichman's Foping was located). For our purposes, it is clear that future development of the historical and cultural aspects of the Tangluo Road network must work hand in hand with the important mission of these Reserves.

The terrain background to joint use of the Qinling

Using the combined power of terrain analysis, Google Earth and some of the hard won field data as summarised in the Panda Book (Pan, 1988) can help us to understand how travellers and Pandas may have co-existed in the past and may continue to co-exist in the future. In Pan (1988), the writers summarise painstaking field observations of the way Pandas move through the terrain to various places to feed during the summer. They summarised their observations for the Youshui catchment inside the Xinglong Ling high ridge system as shown in Figure 25:

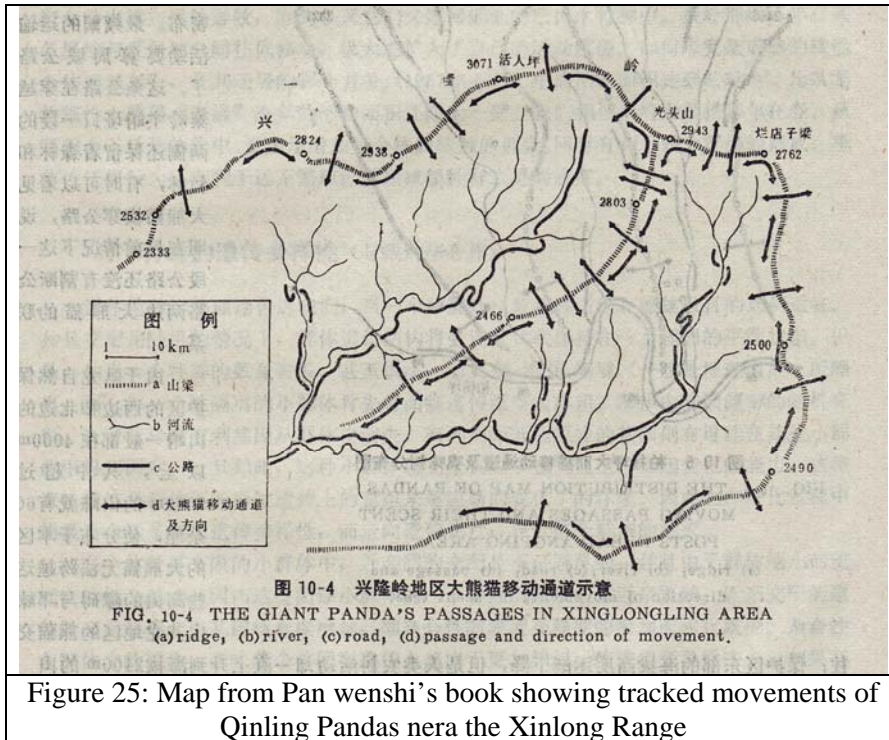


Figure 25: Map from Pan wenshi's book showing tracked movements of Qinling Pandas near the Xinlong Range

The map shows two branches of the upper headwater area of the Youshui River that runs down to Huayang Zhen. The arrows indicate Panda movements determined by radio tracking. The two roads shown exist today and were part of the ancient Tangluo network. The upper road is the one Teichman followed to get to the Xinlong Ling Pass and the lower is the alternative route he mentions. This alternative route crosses the divide at the Landianzi Pass. It is relatively easy, using the terrain enhancements described earlier, to map these ridges and peaks. The result of doing this in Google Earth is shown in Figure 26:

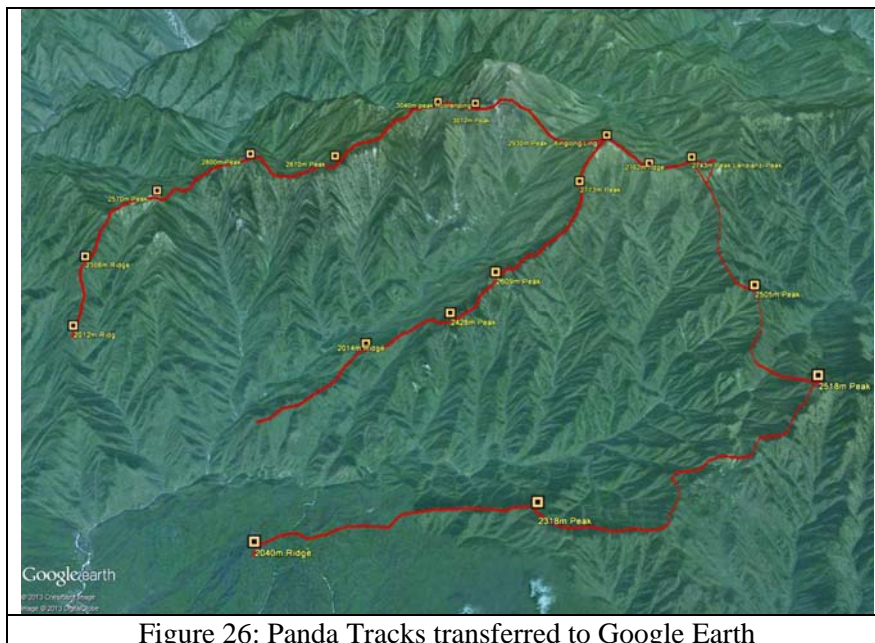
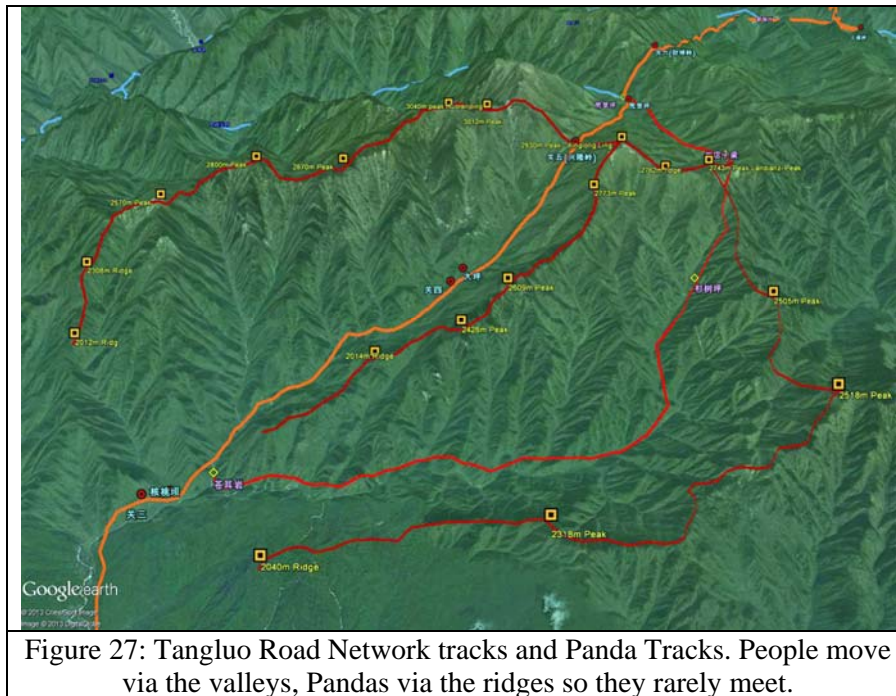


Figure 26: Panda Tracks transferred to Google Earth

If the proposed routes making up the Tangluo Road network are opened in Google Earth we find (Figure 27) that the two sets of routes are different:



The Pandas apparently traverse the catchment along ridge lines, moving down from the ridges to feed as needed. If this pattern is persistent it could explain why Pandas and travellers rarely met. That is because the travellers move through the area along roads in valleys and cross from valley to valley by the passes. The only places where the two groups may meet in Figure 27 are the high passes such as the Xinglong Pass and the Landianzi Pass. Perhaps this is why Pandas have stayed almost “invisible” throughout the historical times.

If Pandas and travellers have shared the mountains since ancient times then Pandas, adventure tourists and trekkers can also share them in the future – as long as it is we who take greatest care – the Qinling Pandas being more endangered by us than we are by them.

6. Concluding remarks

When Sir Eric Teichman decided to take the middle route across the high passes near Taibai Mountain on his way from Hanzhong to Fengxiang in 1917 he was no doubt doing it both from a strong sense of adventure and also to see whether or not these little known wilderness areas were supporting opium cultivation. 100 years before, stung by the success of the White Lotus rebels, the Qing government had moved to pacify the Han River Valley and the Qinling with increased official presence and economic stimulus. Since that time, garrisons and magistrates had been managing the area with its booming population and trade very well. When Sir Eric visited the remote district magistrate at Foping he was warmly welcomed and entertained and went on his way knowing that the mountains were not bandit dens and free of the “curse of opium”. But all this was to change rapidly in the following years as China slid rapidly into a time of warlords, bandits, civil war, poverty and hardship and opium once again bloomed in the western areas.

But by recording his explorations and thoughts along the way so carefully and accurately, Sir Eric had also provided a story with which to open the eyes of western people to some little known areas of China’s history and geography. His map was better for this area than any previous map and his detailed route log with distances, directions and altitudes provided a way for people to follow if they wished. That few westerners did so was not the fault of Sir Eric but rather the times of transition. It may only be after another 100 years from the time of Sir Eric’s journey that the full impact in the west of such travels and histories will become well known. But as western people follow to visit the Qinling, the long history, the cultural significance, the remote and beautiful wilderness, the abundant and unusual wildlife and the romances of poets and writers will become increasingly sought after. Chinese have always known these things to be associated with the central Qinling but they were well outside of Sir Eric’s diplomatic brief and field of view as he toured western China. They do not have to stay hidden any longer.

In this document, we have described Sir Eric Teichman’s travel route and expanded the investigation to include the greater extent of the ancient Tangluo Road network. We have added some histories of the Tangluo network and its major towns as well as the significance of the region in global conservation for its special wilderness environment and rare species. The geography of Sir Eric Teichman’s journey and the wider ancient network has been embedded into a Google Earth presentation using supporting material previously only available in Chinese that has been translated and provided in English for interested readers. The material has been brought together along with this document at the “Qinling Plank Roads to Shu” website [HERE](#). Translations, old and new maps, old photographs and many other materials have also been brought together ([HERE](#)) to support the document and support the interests of potential travellers whose primary language is English.

The Tangluo Road region has everything an adventurous traveller may wish. It has untouched wilderness, rare and endangered species, yet unknown relics of a long history, still dangerous routes and hikes through dense forests and bamboo thickets with high passes to cross as well as mountains to climb. But the Tangluo Road also has mystery and romance. Whether it is in the story of the Qinling Pandas that were

studied by Pan Wenshi in the 1980's, or the possibility than Yang Guifei escaped from death to flee south along the Tangluo Road and eventually leave China for Japan, or the story of the Later Han Princess Yin Niangniang or the story of the rise of world class conservation and wildlife Parks in a China still emerging from a difficult past and entering a new age. These can all call out to adventurous and fit young people to come and find out what Sir Eric Teichman could hardly have imagined.

Chinese have also come to this area in increasing numbers to get to know their Chinese ancient culture and history. Among them was the writer and photo-journalist Shui Xiaojie who wrote a series of short stories about the Han River basin from its source to the Yangtze. These were based on travel and experiences he had over some years following 2003. His piece on the Tangluo Road was entitled “Did Yang Guifei escape along the Tangluo Road?” (Shui, 2003) But his piece is only briefly about historical mysteries and demonstrates well the thinking and attitudes of a modern and adventurous young Chinese searching for the past that has defined Chinese culture. It does not mean he felt good about everything he saw, but his opinions are honest and in themselves are a good reason to read his story. It has been translated and is available on the Qinling Plank Roads website [HERE](#). But we can briefly indulge ourselves now in a little of the legendry side of the Tang period as described by Shui Xiaojie:

“I was much more interested in some things that the official history does not include. One of these is the possibility that a very famous Lady, Yang Guifei¹⁵, while fleeing from home, passed along the Tangluo Road. It is said among the local people that the person who hanged herself at Mawei Po in Xingping county of Shaanxi in the 15th Tianbao year of Tang Xuanzong (756 CE) was only a scapegoat. When the Emperor Xuanzong dispensed with the love of his life, and went via the Ancient Baoye Plank Road to Sichuan, (they say) the 38 year old Lady Yang Yuhuan had secretly arranged to go by the Tangluo Road and Han River to reach Yang Zhou. In the end she travelled over the sea to reach Japan, [so that] up to the present day in that island country, Xiangjinju Bandao in Shankou Xian (Yamaguchi prefecture) is “Yang Guifei's home village”, [where] there are still many relics. ...”

“Of the various ancient plank roads that lead to the two banks of the Han River, one seems to have changed its name on account of that the famous Lady. In Du Mu's “On the way to the Pure Palace” there is a verse that suggests this: “Looking back to the walls of Chang'an, the tops of the beautiful mountains open like the 1000 gates. An Imperial Lady laughs at the pursuing horses; nobody could know that a Lychee was passing by”. The road called the “Lychee Road” was originally the “Jian Road”. Yang Yuhuan was addicted to the Lychee fruit, which addiction the court satisfied by establishing a top quality Lychee Garden at Fuling in Sichuan, and they repaired the road from Fuling in Sichuan to Chang'an. The Lychee fruit came by fast horse on the road via Da Zhou (present day Daxian in Sichuan) to Xixiang in Shaanxi, then entered the Ziwu Valley and arrived in Chang'an after only 3 days. In Chang'an they presented Lychee fruits to the Lady that were as fresh as when they had left. In this regard, Du Fu wrote with a sigh: ‘One hundred horses have died in mountain valleys, old people who remember are still filled with sorrow’.”

¹⁵ Yang Yuhuan (杨玉环, ca. 719-756 CE) is widely known as Yang Guifei or "Imperial Consort Yang". She was the favourite of Tang Xuanzong. Her Tomb is at Maweiyi (马嵬驿) in Shaanxi.

Reputable historians may not wish to include or promote these romantic but unsupported stories so it is good that journalist writers like Shui Xiaojie do. For the rest of his story you can read the translation [HERE](#).

Today, many Chinese are going into the Qinling Mountains to experience its unique environment and participate in its future conservation. Among Chinese people, history is not so much “close by” as “embedded” into their makeup and thinking. It is no surprise that despite the difficulty we had here of constructing our maps and presentations from traditional information sources, a plan for a hiking journey along modern roads, complete with information on where buses are available can be found on the Chinese web – in a Blog. From this we find that it is now possible to go by bus to Huayang and beyond to Daping Wildlife Conservation station. This is no doubt the same Daping of “*some huts and a mule inn called Ta P’ing, with a little cultivation, mostly potatoes*” where Sir Eric stayed overnight before tackling the high passes. Hopefully the provisions are better than potatoes today. Even more evidence of Chinese interest in environment and history will no doubt be seen along the road over the coming summers as Chinese explore their history and environment. This document seeks to hang some of the information previously only available in Chinese onto the straight backed framework of Sir Eric Teichman’s original journey. It aims to encourage western people to learn much more about the place whose high passes and bamboo forests Sir Eric pushed through in 1917 and to join Chinese in their adventures. Hopefully, opening this door will lead to many others. Truly, 打开眼界.

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8. Appendix 1: Teichman's Travel Log

In the introduction to Chapter IV, Teichman writes: "We returned to the Wei valley by the Fop'ing trail, which debouches on to the plain at Chouchih Hsien, whence we turned westwards to Fenghsiang Fu. From Hanchung to Fenghsiang by this route is a distance of about 840 li". He then follows with the following extracted description:

Track Notes:

For the first two days from Hanchung the road runs down the valley plain past the district city of Ch'engku Hsien to Yang Hsien, two easy stages of 75 and 60 li respectively.

[End of first two Stages] Hanzhong to Chenggu 75 Li; Chenggu to Yangxian 60 Li.

The difficulties of this route begin on leaving Yang Hsien. The trail here turns north and reaches the base of the mountains after about 8 li. After following a small valley for a short distance, it leaves the stream and ascends over cultivated downs to reach the edge of a spur between two ravines. There is a steep scramble up this ridge for two hours or more by a very rough rocky track to the top of the first range bounding the valley. The view from this ridge looking north is over a series of steep sparsely timbered ranges, rising one behind the other and blocking the way to Fop'ing. From the pass (4400 feet) there is a steep drop into a winding gorge which debouches after an hour's march into the ravine of a stream flowing S.E.; a short distance up this ravine lies an inn, called Ta Tientzu, 65 li from Yang Hsien, which makes a suitable halting-place for the first stage.

[End of Stage] at Dadianzi 65 Li from Yangxian

From Ta Tientzu the trail continues up the ravine to the north, past the hamlet of Hohsiatzu, for 35 li to the foot of another range running east and west. There is a stiff climb of about a thousand feet to the pass (5500 feet), followed by a precipitous drop of as much down the other side into a ravine which leads straight down to the un-walled township of Huayang Chen, lying in a basin of sandstone at the junction of several ravines which provide water and space for rice fields, the last seen until the descent into the Wei valley five days further north. The surrounding mountains are much broken, prettily wooded, and full of pheasants. To the north a high range runs east and west across the direction of Fop'ing, while to the south-east there is a large gap in the mountains following the flow of the stream. This stage is also about 65 li.

[End of Stage] at Huayang 65 Li from Dadianzi

The trail now continues north up a boulder-strewn valley which soon contracts to a gorge, and then turns up a side glen which leads after a scramble to the pass (6000 feet), two to three hours' march from Huayang. This ridge is the boundary between the districts of Yang Hsien and Fop'ing Hsien and the magistrate of the latter had left his isolated post in the wilds of the Ch'inling Shan to meet us here. There is a fine view to the north over two high rocky ranges running east and west, the further one rising to a height of over 10,000 feet. From the pass the track drops steeply into the

gorge of a stream flowing west, where there are some huts called Hot'ao Pa. Crossing the stream the path strikes almost immediately into another glen, which leads up through dense thickets of the dwarf-bamboo to the top of the nearest of the two ranges seen from the last pass. From the summit there are fine views all around over the mountains densely wooded with pine, birch, and other trees; to the north the same high range still blocks the road to Fop'ing. From this pass (7000 feet) there is a precipitous drop of a few hundred feet into the gorge of another stream flowing S.W., up which the trail turns northwards for a few li to reach some huts and a mule inn called Ta P'ing, with a little cultivation, mostly potatoes. We halted here for the night, 60 li from Huayang.

[End of Stage] at Daping 60 li from Huayang

Note 1 about an alternative Route – on Zhou's main trunk route:

[This is a tiring march, practically one long scramble up and down the mountains all the way, by very bad tracks much too rough to ride over. The second pass can be avoided by taking an alternative route down one stream and up the other, which is said, however, to be impassable for mules.]

Note 2 on Altitudes:

[Ta P'ing is nearly 7000 feet high, Huayang Chen about 4000, Ta Tientzu about 3000, and Yang Hsien about 1300. The trail thus ascends by a series of steps from valley to valley across the intervening ranges from the Han River to the heart of the Ch'inling Shan.]

On the following day's march the trail continues up the stream to the N.E. through forests of pine and birch for about 15 li to reach the pass in the big range. The ascent is comparatively easy except for the last few hundred feet, the valley being flat and open and apparently of glacier origin in contrast to the deep narrow gorges usual in the Ch'inling Shan. From the summit of the pass (9000 feet) there is a fine view to the north towards T'aipai Shan (12,000 feet), which appears as a rocky ridge sprinkled with snow, with a lower range in the immediate foreground over which the path leads to Fop'ing. The pass is called the Hsinglung Ling, and is crowned with an old ruined temple and gateway.

Note 3 on the Xinglong Ling Pass:

[There are additional signs that this trail, now unused except by a few isolated coolies carrying salt into the Han valley, smugglers, and others with good reasons for avoiding the main road, was once a much more important route. It is of course the most direct road from Hsian to Hanchung.]

From the pass there is an easy descent through another flat open valley, where we saw some silver pheasants (or perhaps they should be referred to as blood pheasants, a species of *Ithagenes*), into the valley of a stream flowing west, where there is some cultivation, as usual mostly potatoes, and some huts, called Huangts'ao P'ing; these valleys are less thickly wooded than those on the southern side of the pass. Here the trail leaves the stream at once and strikes up the opposite slope to the north to reach another pass after an hour's easy climb. This range is the last to be crossed before reaching Fop'ing and is a few hundred feet lower than the Hsinglung Ling. From the pass there is a steep descent by a very rough track through a narrow gorge until one

debouches after about 25 li into the broad cultivated valley of the Fop'ing River, up which the road runs eastwards through corn fields swarming with pheasants for ten li to Fop'ing T'ing.

[End of Stage] (stayed a couple of days) Estimated 60 Li from Daping using 15 Li between the Xinglong Ling Pass (Teichman Pass 5) and the Caishen Ling Pass (Teichman Pass 6). This distance was not provided directly by Teichman.

Leaving Fop'ing the track climbs up the range immediately to the north by zigzags to reach the pass about a thousand feet above the valley, whence there is a fine view over a wilderness of mountains all around. To the N. and N.W. lies T'aipai Shan, a bare rocky ridge still carrying a good deal of snow in May. This pass (about 7000 feet) is the watershed between the Yangtzu and Yellow River basins, the streams to the north all flowing down into a river called the Hei Ho, which rises in Fop'ing district and flows through the mountains to join the Wei near Chouchih Hsien. The trail to the latter place, however, does not follow down the gorges of this stream, but passes directly N.E. over a series of spurs running down from T'aipai Shan, and is little if at all less arduous than the portion between Yang Hsien and Fop'ing.

From the pass the path drops steeply through a pine wood into a densely wooded gorge running east. After an hour's march down this ravine the stream is joined by one of greater volume flowing down from the snows of T'aipai Shan. The scenery in this neighbourhood is exceedingly beautiful, the torrent descending in a succession of cascades through a gorge hemmed in by densely wooded heights. Continuing down this winding ravine for another hour's march, the village of Houchentzu is reached, where the valley opens out and there is some cultivation. Here the path leaves the stream, which flows off towards the east to join the Hei Ho, and strikes up a gully which leads after a steep ascent to a pass over a ridge some 1500 feet above Houchentzu, whence it drops precipitously into the cultivated valley of another stream flowing down from T'aipai, and reaches the village of Taima Ho, at about the same elevation as Houchentzu (4500 feet) and 60 li from Fop'ing. This was another hard march, scrambling up and down mountains all day; but the scenery was so fine and the air so bracing that no one seemed too tired.

[End of Stage] at Dama He 60 Li from Foping.

At Taima Ho the track again leaves the stream, which flows east into a deep gorge towards the Hei Ho, and turns northwards up the mountain side to gain a pass over a ridge some 1500 feet above the valley. The ascent is easy, this spur being covered with a sort of clayey loess cultivated in terraces; the appearance of loess so far in the Ch'inling ranges is unusual. From the pass the track drops into the gorge of another stream flowing down from T'aipai Shan; it follows up this gorge for a few li past the hamlet of Ch'enk'ou Wan and then turns up a side ravine to reach the base of a ridge called the Laochün Ling. From here there is a stiff climb for two to three hours, ascending 2500 feet, up a wooded mountain side to reach the pass (7500 feet), T'aipai Shan again becoming visible at intervals. From the summit there is a fine view to the S.W. across the lower ridges traversed by the trail back to the watershed range north of Fop'ing. After a steep drop of 2000 feet through a gorge, Watientzu is reached, a few huts and inns, surrounded by precipitous mountains, in the ravine of a stream

flowing down from T'aipai. This is another tiring march of 60 li. One is here in the district of Chouchih, the Laochün Ling ridge being the Fop'ing boundary.

[End of Stage] at Watianzi 60 Li from Dama He

From Watientzu the path runs down the narrow wooded gorge for about two hours' march, and then turns north up a gully which leads after a steep climb of 2000 feet to the summit of another ridge trending S.E. This is the last of the eleven passes which have to be crossed on this trail between the Han and Wei valleys. From the northern face of the range there is a very fine view over the Wei valley plain nearly five thousand feet below. From the pass the track descends by steep zigzags and then through a narrow gorge for three hours' march to reach the village of Hsink'outzu, lying a little above the plain at the base of the mountains, 80 li from Watientzu.

[End of Stage] at Xinkouzi 80 Li from Wadianzi

From Hsink'outzu to Chouchih Hsien, a distance of 30 li, the track descends across an undulating plain, which in spring is one vast wheat-field dotted with hamlets and the walled farms peculiar to the Shensi plains. Chouchih, a first class Hsien city and the centre of one of the rich agricultural districts of the Wei valley, lies a few li to the south of the Wei River.

[End of Journey] at Zhouzhi 30 Li from Xinkouzi

9. ENDNOTES

ENDNOTE [1] Chinese text for a modern hiking route listed in a Tangluo Road web blog. The Blog can be seen at:

<http://tieba.baidu.com/p/375985852>

大概行程:

1. 骆峪口---龙窝---大石瓮---碾子坪---鹰崖子栈道---矿场---茅草坪---八姐石---五道河口---关平梁垭口(2400m)---陈家河过夜
2. 陈家沟---关城子---老君岭垭口(2557m)---洛阳宫(殷娘娘出家处)---称沟湾---八斗河住一夜
3. 八斗河---麦场(玉兰王)---岭上---麻池子---卡方梁垭口(1870m)---殷家坪(娘娘庙)---大蟒河---大蟒河---老场---父子岭垭口(1585m)---九沟口---厚畛子住一夜
4. 厚畛子---沙坝---钓鱼台---药铺---秦岭垭口(2100m)---老县城---都督门住一夜
5. 都督门---40里吊沟竹林地段---财神岭垭口(2540m)---黄草岭---兴隆岭垭口(2670m)---长青保护区住一夜(已通车)
6. 大坪保护站---华阳镇(古道从大坪开始已与公路重叠,可乘车) 走路半天就够(可选择休整)

<1>

7. 华阳-牛岭山-黑峡(附近村子较多)
8. 黑峡-八里关-大树垭口-马龙草顶峰-马道村-四郎乡-悦河口 应该还可以赶上回西安的车

<2>

7. 华阳--牛岭山-黑峡-八里关住一夜
8. 八里关-大树垭口-马龙草顶峰-马道村-四郎乡-悦河口 应该还可以赶上回西安的车

ENDNOTE [2]:

The following material came from the web site

<http://baike.baidu.com/view/975609.htm>. However, it is clear by searching that the material comes (at least in the greater part) from the draft document being prepared by the Foping Government called:

“A Cultural Survey of Foping”, Chen Yongbo (Ed)

《佛坪文物概况》陈永波主编，佛坪人民政府

The parts translated and quoted in this document are as follows:

据清光绪二十三年编《十一朝东华录详节》载：“道光四年（1824）乙酉，添设陕西佛坪抚民同知、巡检各一。改……镇平巡检为袁家庄巡检”。据中华书局1955年出版《清代地理沿革表》载：“道光四年，析洋县及西安府之周至县地，置佛坪厅，隶府”（该书注资料来源为《高宗实录》及《佛坪厅志》。查《佛坪厅志》记载为佛坪厅建于道光五年）。“乙酉”为道光五年纪年。另据原佛坪厅治佛爷坪《重建文庙、文昌宫碑记》（道光十八年立）载：“佛坪厅治建自皇上御极之四年。”

根据《佛坪厅志》、《佛坪乡土志》、《清史稿》、《续修陕西通志》、《陕西地理沿革》、《陕西省志·行政建置志》等资料记载，佛坪厅建于道光五年；

1986年佛坪县志办公室赴厅城考察，发现城砖上铸有“道光五年造佛坪厅城砖”字样，知佛坪厅城建于道光五年。

综以上资料推断，佛坪厅建置时间：朝廷核准设立为道光四年（1824年），首任厅同知景梁曾赴任筹办建厅事宜，筑城建署时间为道光五年。佛坪于清道光五年（1825年）设厅。

1913年，佛坪厅改为佛坪县，属汉中道管辖，佛坪厅厅城成为佛坪县县城。民国初年，秦岭山区成为鸦片产地，佛坪匪患成为顽痼。1922年，在一个寒冷的3月夜晚，一伙土匪越过城墙，竟生擒了那夜正在县衙里交接任的两位县知事，穿过丰乐门而去。后来，人们在财神岭发现了两位身首异处的知事。此后，佛坪县接任的知事再也不敢在佛坪县城久居佛坪县，背着县府大印四处游荡。老佛坪县城成为土匪盘踞的据点。

1924年，佛坪县知事索性将佛坪县政府搬移到佛坪县袁家庄。佛坪老县城大批的居民，牵牛携犬，随之搬迁而去。佛坪县县城搬迁后，人口散了，繁华的市井败落了，原来的佛坪厅厅城，演变为“老县城”一个村庄。1958年11月到1961年8月，佛坪县曾一度撤销，老县城所在地归周至县管辖。—1961年8月，老县城复归佛坪县。1962年7月，老县城村所在厚畛子人民公社正式划归周至县。于是乎，袁家庄则作为佛坪县的新县城理直气壮地顶替了真正的佛坪老县城的地名——佛坪，许多人张冠李戴误将老县城村认为是周至县的老县城。甚至在《周至县志》中，由于老县城原来是佛坪的地盘，没有收录有关老县城的史料，而在《佛坪县志》中，因为老县城已经划归周至县管辖，因而没有关于近代老县城的记载。历史似乎在这里断裂了。

ENDNOTE [3] Chinese text for translation of material from Pan (1988)

如上所述，秦岭的陆生脊椎动物种类是十分丰富的。我们把已知生活在秦岭地区的兽类、鸟类和两栖类的名录汇集为总表，[拜?]列举每种动物的地理分布和区系从属关系，便可以看到本区脊椎动物多样性的规模（见表5-1）。

在所有的脊椎动物中，我们特别关注兽类的区系组成及分布特征，因为它们在地生动物区划中起了重要的作用，同时有助于我们认识大熊猫何以在秦岭南坡保留下来。

陈服官等（1986年）在分析秦岭兽类区系的形成过程时指出，其中古北界类型中的欧洲--西伯利亚种类由北方向南方分布至此；东北--中国种类由西伯利亚和中国的东北地区经华北到达；中亚种类由西北方向经新疆、甘肃延伸而来；青藏种类则由西南方向的青海一带侵入。东洋界类型中的中国-缅甸种类则由南方向北方分布。故秦岭山脉为东南西北各路动物群的荟萃之处。这充分表明秦岭兽类区系组成的复杂性及多样性。