



Training Workshop on the Role of Forest Resource Management in GMS

(July 11-21 2012 Yunnan, China)

Field Trip Guide

July 17-20, Pu'er City

field Trip Guide

Pu'er City

July 17-20 Yunnan , China

Program Schedule for Field Sites

- July 17 08:30 - 12:30
Drive from Kunming to Tongguan.
13:30 - 13:30
Lunch in Tongguan.
15:00 - 16:00
Drive from Tongguan to Pu'er City and check in at
Shuangfeng Hotel (Double Phoenix Hotel)
17:00
Introductory meeting with Pu'er Municipal Government and
Pu'er Forestry Bureau. Introduction of local and international
representatives and participants; Brief introduction to forest
management in Pu'er.
18:00
Welcome dinner hosted by Pu'er Municipal Government.
- July 18 08:30 - 09:30
Drive from Pu'er to Nanben.
09:30 - 10:20
Visit the propagation and cultivation base for rare and high
value medicinal plants in Nanben, including *Dendrobium*
spp..
10:30 - 10:20
Drive from Nanben to Wangzhangshan Forest Farm.
10:30 - 11:20
Visit the plantation forest of Simao pines (*Pinus kesiya*).
11:20 - 12:30
Drive to Simao Port, and visit the Simao Port on the Mekong
River artery; and a distant view of Nuozhadu Provincial
Nature Reserve established for conserving the Asian elephant
(*Elephas maximus*).

12:30 - 13:30

Lunch in Simao Port.

13:30 - 15:30

Drive from Simao Port to Pu'er City.

15:30 - 17:00

Visit China Pu'er Tea Research Institute and agricultural landscape of vast tea farms.

17:30

Return to hotel in Pu'er City and take lunch midway.

18:00

Dinner

July 19

08:30 - 09:30

Drive from Pu'er City to Caiyanghe Provincial Nature Reserve

09:30 - 10:00

Site visit in Caiyanghe Provincial Nature Reserve

10:00 - 12:30

Drive from the nature reserve to China Pu'er Tea Museum

13:00

Return to Pu'er City for Lunch.

July 20

8:30 - 09:30

Drive from Pu'er City back to Kunming, lunch in Mojiang

17:00

Arrive in Kunming and check in at Jinquan Hotel

18:30

Dinner

Brief Introduction to the Field Sites

A Brief introduction to Pu'er City

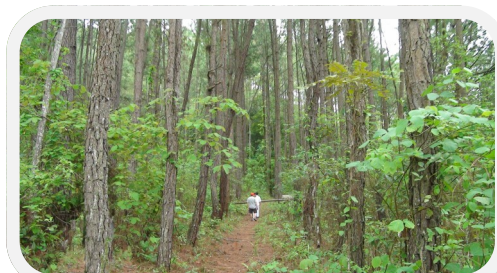
Pu'er City is situated in Southwest region of Yunnan Province and administers one district and nine counties over a jurisdiction area of 45,385 km². It is the largest prefecture in Yunnan in terms of area. Pu'er City is 470 km from Kunming. Pu'er Prefecture borders the Laos and Vietnam in the Southeast and adjoins Myanmar in the Southwest, sharing an international border of 625 km with these countries. The Lancang (Mekong) River, Red River and Nankang River flow to the neighboring countries. A significant segment of the famous Southern Silk Road traverses Pu'er City. The total population of Pu'er Municipality is 2.37 million, of which 1.44 million are ethnic minority peoples, accounting for 61% of the total. There are 36 ethnic minorities in the prefecture and 14 of whom are indigenous inhabitants, which include mainly the Hani, Yi, Dai, Lahu, Wa, Bulang and Yao peoples. It is an important production area of the renowned Pu'er Tea and one of the largest tea production areas in China.

Distributed within the territories of Pu'er Municipality are vast undulating mountains that occupy 98.3% of its landscape. Due to its proximity to the Tropics of Cancer and an integrative impact of the physiognomy and varying elevation gradient from 376 to 3,306 meters, distinctive vertical climate zones are widespread in the region. Being located at the same latitude with that of Cuba in Central America and Taiwan Province of China and as a result of its location on the transient area between the northern and southern bio-geographic regions, its landscape has long been reputed as "a magic natural museum" which is composed of mainly species diversity, lush primary forest vegetation, rare and special animals, a broad array of exotic flowers and rare herbs and uplifted landscape that are supplemented by a strong tinge of ethnic cultures, Yi folklores and other indigenous humanistic landscapes. Weather Forecast :

1. Nanben Propagation and Cultivation Base for Rare and High Value Medicinal Herbs

Time to visit: From 09:30 to 10:20 on July 18, 2012

Jinling Plant Pharmaceuticals Company is the largest of its kind in using the



medicinal herbs *Dendrobium* spp. in China. Currently, the company has three subsidiary companies, two of which are in China and one in Oudomxai Province of the Laos PDR. All of these subsidiary companies are specialized in growing rare and high value medicinal herbs, such as *Dendrobium* species, and they are the

leading enterprises in Pu'er City. For a decade since the founding of the company, it has become the earliest *Dendrobium* growing enterprise, and the largest of its kind in the region. The company has adopted the management model of "company + plantation bases + farmer households". It has promoted the development of more than 30 plantation bases and 3,000 farmer households specialized in growing *Dendrobium* medicinal herbs which have contributed substantially to poverty alleviation amongst the rural farmers in the mountainous areas. These efforts further contributed significantly to the sustainable extraction and use of *Dendrobium* resources, and to promoting the modernization, internationalization and industrialization of traditional Chinese herbal medicines.

2. Wanzhangshan and Mayanshan Afforestation Project

Time to visit: From 10:30 to 11:20 on July 18, 2012

Wanzhangshan Forest Farm is a new type of state-owned forest farm that was created through reforming a previous forest logging enterprise. The forest farm covers 8,800 hm², of which 4,267 hm² are commercial forest and 4,533 hm² amenity/ecological forests that are distributed in the first level tributary of the Lancang (Mekong) River. Currently, the forest farm hires 60 staff members to carry out the overall forest management and protection. In the past decade, the forest farm has implemented the low-yield forest improvement program and afforestation on barren mountains. In total, about 4,000 hm² of plantation forest was established and eight million trees planted. The indigenous species, *Pinus kesiya* (Simao pine),

is the main tree species used in the afforestation project. The survival rate has maintained at above 96% in the planting year and preservation rate above 86%. Through years of efforts, the forest stands in Wanzhangshan Forest Farm has been greatly improved. Sustained forest resources were enhanced significantly and net growth of forest resources is also increasing steadily. The establishment of effective management models for state-owned forest farms has contributed substantially to the management goals of "seeing green mountains and steady stock growth", and to the erosion control and ecological protection in the watersheds of the Mekong River.



Mayanshan Afforestation Project

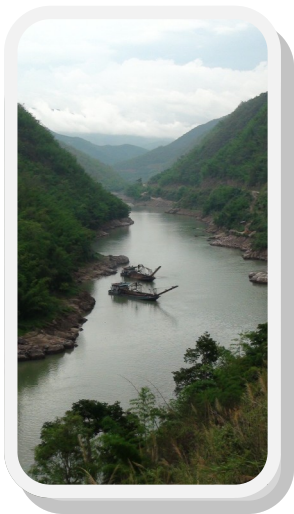
Mayanshan Forests belong to state-owned forest with a total area of 1,667 hm². Incompatible uses since history have led to species reduction, drastic degradation of forest physiognomy and forest quality. Since 2001, the forest farm launched the low-yield forest improvement project. Multiple logging models including forest clearing, selective logging and thinning in small patches have been practiced. Nutrient bag seedlings were used in reforestation in cleared areas and resin tapping on the remaining trees on logged over areas was banned. As of 2010, the overall forest thinning and tending for the area was completed. Through these improvement efforts, the overall forest physiognomy has shown great uniformity and the quality of forest stands has improved to a great extent. Plants and animals in the forest areas were well protected and the ecological functions of the forest for watershed protection have been greatly strengthened.

3. Simao Port and Nuozhadu Provincial Nature Reserve

Time to visit: From 11:20 to 12:30 on July 18, 2012

Simao Port

Simao Port is the first port in China's territory for international navigation on the Lancang-Mekong River. Traversing alone the Lancang-Mekong River, the navigation route takes you to the Laos, Myanmar, Thailand, Cambodia and Vietnam. It is a golden navigation channel that links China with the Southeast Asian countries, and an important gateway for Yunnan and the Great Southwest



Region of China to reach Southeast Asia. The port is 87 km from Simao, 85 km from Jinghong (water course), 420 km from the Golden Triangle, 787 km from Luang Prabang in the Laos and 1,260 km from Vientiane, thus enjoying very advantageous geographical positions.

The total planned area for Simao port is six square kilometers and the designed annual freight transport capacity is 300,000 tons and 100,000 passenger times. Up to now, 0.5 km² has been constructed and 140 million Chinese yuan was invested from the national, provincial, municipal funding sources, as well as from other circles of the society. The dock, transportation roads, port administration, warehouse and equipment have been furnished. Within the port, the customs and offices for border check, commercial check, quarantines for animals

and plants, as well as health check have been set up.

Nuozhadu Provincial Nature Reserve

Nuozhadu Provincial Nature Reserve is located at a junction area between Simao District and Lancang Lahu Ethnic Minority Autonomous County of Pu'er Municipality in Yunnan Province. The Lancang-Mekong River flows through the nature reserve from northwest to southeast. The nature reserve is positioned in the low-latitude region in Southern Yunnan on a transient zone between the northern edge of the tropical and the southern subtropical regions. It is a typical nature reserve of the subtropical forest ecosystems in Southern China. The area of the nature reserve is 21,679hm².

Found in the nature reserve are 2,010 species (variants) of vascular plants belonging to 201 families and 906 genera, including 102 fern species from 32 families and 63 genera, 1,914 seed plant species from 169 families and 843 genera, of which eight genera are endemic to China. There are 29 wild

animal species listed for national and provincial protection, including eight species for National Class I Protection, 17 species for National Class II Protection



and one species for Provincial Class I Protection and three species for Provincial Class II Protection. The key species listed for special monitoring include the Asian elephant (*Elaphas maximus*), Indian buffalo (*Bubalus bubalis*), Malay bear (*Helarctos malayanus*), (*Nycticebus coucang*), Assamese macagu (*Macaca assamensis*) and Komodo dragon (*Varanus salvator*).

4. China Pu'er Tea Museum and Tea Farm Agricultural Landscape

Time to visit: From 13:30 to 17:00 on July 18, 2012

China's Pu'er Tea Museum, being situated in the background of 1,533 hm² of tea plantations at an elevation of 1,700 meters and surrounded by green mountains of beautiful sceneries, is composed of a tea house, an area for tea harvest experience and the Pu'er Tea Museum. It is reputed as a miniature panorama of Pu'er tea. The mysterious world of Pu'er tea is introduced here to the visitors, ranging from the origin and improvements, development and evolution, planting and production, ethnic origins, processing and packaging, historical cultures, collection and marketing, as well as tea serving and appreciation.



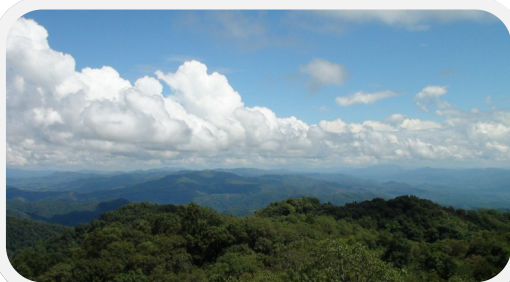
Here in the Pu'er Tea Museum, you are entertained with the pleasure in viewing tea plantations, tea picking, tea making, tea drinking and appreciation, tea competition, tea worshipping and tea purchase, which demonstrate best of the exclusive "six most" of the tea cultures: the largest theme park of Pu'er tea, the most complete types of tea resources, the richest specimens of Pu'er tea, most tablets, poems and lyrics about Pu'er tea, and the most elite Pu'er tea arts and ceremonies, as well as the most profound Pu'er tea cultures.

5. Caiyanghe Provincial Nature Reserve

Time to visit: From 09:30 to 10:00 on July 19, 2012

Caiyanghe Provincial Nature Reserve is located in the southeastern part of Simao District in Pu'er Municipality. Covering an area of 14,892 hm², the naturereserve is located in the low latitude zone in Southern Yunnan and belongs to the type

of nature reserves with subtropical forest ecosystems in Southern China. It is named after the Caiyanghe River that flows through the nature reserve. The nature reserve was established in October 1981 upon the approval of Yunnan Provincial Government. In 1986, the management office of the nature reserve was officially set up with staff quota to carry out the management and patrolling of the nature reserve. The core zone of the nature reserve is 6,747hm², or 45.3%, and the experimental zone 8,145 hm², or 54.7% of the total.



Wild animals: There are 415 wild animal species listed for national and provincial protection in the nature reserve, including 71 species for national protection and 344 species for provincial-level protection. These include 102 mammals, 222 birds and 91 reptiles. The species listed for key monitoring include: Indian buffalo (*Bubalus bubalis*), sambar deer (*Hydropotes inermis*), Indian muntjac (*Muntiacus muntjak*), red jungle fowl (*Gallus gallus*), silver pheasant (*Lophura nycthemera*), great white egret (*Oriolus traillii Vigors*), Komodo dragon (*Varanus salvator*), python (*Python molurus bivittatus*) and latera-stripe salient tree frog (*Chirixalus vittatus*) and so on.

Vegetation and plants: The nature reserve is rich in plant species. There are 2,104 high plant species (variants) above the ferns recorded in the nature reserve that belong to 883 genera in 209 families. Also, there are 892 species of medicinal plants in the reserve that belong to 530 genera in 163. In total, 36 species are listed for protection, including one species for National Class I Protection, 15 species for National Class II Protection, and 20 species for provincial protection in Yunnan. Fifty species are endemic to Yunnan.

5. China's Pu'er Tea Research Institute

Time to visit: From 16:00 to 17:00 on July 19, 2012

Yunnan Pu'er Tea Research Institute is the only tea research institute established within the university system in Yunnan. The institute has implemented more than 20 research projects funded by the provincial government, the provincial departments of sciences and technology, agriculture and education.

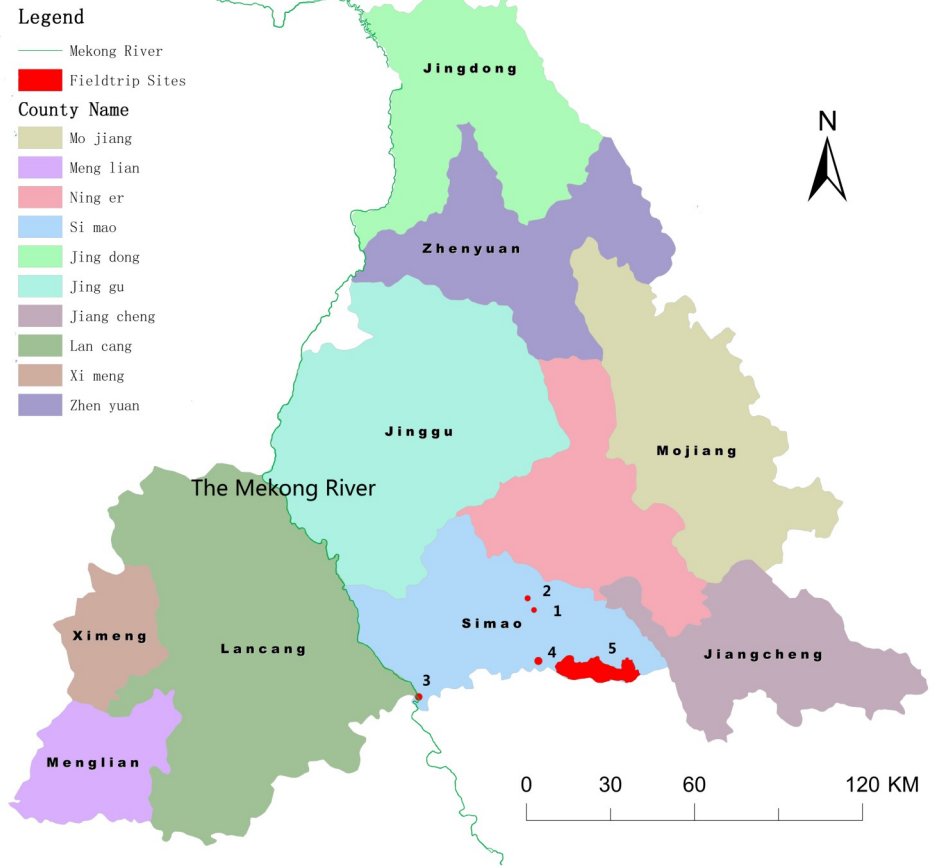
Some outstanding achievements have been made in the germplasm of tea trees in Yunnan, the intrinsic relationship between Pu'er tea processing techniques and its quality, the functional elements in Pu'er Tea, and processing of large-leaf high quality tea varieties in Yunnan as well as the integrative utilization of tea products. The areas of research include the genetic diversity of Pu'er tea germplasm; the key techniques for managing ecological Pu'er tea plantations, key techniques for post fermentation of Pu'er tea, fine processing and integrative use of Pu'er tea, improving the quality of Pu'er tea by using beneficial microorganisms; appreciation of Pu'er tea quality; safety assessment and evaluation of the quality of Pu'er tea; the sustainable development of the Pu'er tea culture, and so on. All these efforts have contributed constructively to the leap-fogging development of the tea industry in Yunnan Province.



For any questions please contact:

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LOCATION OF FIELD TRIP SITES



- 1: Jinling Plant Pharmaceuticals Company
- 2: Wanzhangshan Forest Farm
- 3: Simao Port
- 4: China Pu'er Tea Museum
- 5: Caiyanghe Provincial Nature Reserve