

## **Program Schedule for Field Sites**

- Nov. 18      08:30 - 12:30  
Drive from Kunming to Pu'er City.  
12:30 - 13:30  
Take lunch midway at Mojiang County.  
13:30 - 16:00  
Drive from Mojiang 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 at Hotel Meeting Room Introduction of local and  
international representatives and participants and brief introduction  
to forest management in Pu'er by local officials.  
18:00  
Welcome dinner hosted by Pu'er Municipal Government.
- Nov. 19      8:30-9:30  
Departure from Hotel to Nanben  
9:30-10:00  
Visit the propagation and cultivation base for rare and high value  
medicinal plants in Nanben.  
10:00-10:30  
Drive from Nanben to Wangzhangshan  
10:30-11:00  
Visit afforestation Project in Wangzhangshan Forest Farm.  
11:00-11:30  
Drive from Wangzhangshan to Simao port  
11:30-12:00  
Visit the Simao Port on the Lancang-Mekong River artery and a  
distant view of Nuozhadu Provincial Nature Reserve.

12:00 - 13:00

Lunch in Simao Port

13:00-15:00

Drive from Simao Port to Pu'er City

15:00-17:00

Visit Biodiversity Science Museum and China Pu'er Tea Research Institute

17:00

Return to hotel

18:00

Dinner

Nov. 20

8:30-9:30

Departure from Hotel to Dakaihe Village

9:30-10:00

Coffee and Tea based agroforestry demonstration models

10:00-10:30

Drive from Dakaihe to Caiyanghe

10:30-11:00

Caiyanghe Provincial Nature Reserve

11:00-12:00

Drive from Caiyanghe to Qingshuihe

12:00-12:30

Simao Pin's artificial forests demonstration

12:30-14:30

Return to Pu'er city and have lunch

14:30-15:00

Drive from Pu'er city to Pu'er Tea Field Museum

15:00-16:00

Tea plantation based agroforestry practices in China Pu'er Tea Field Museum

16:00-16:30

Drive from Museum to Sanchahe

16:30-17:00

Agroforestry based High Value Medicinal Herbs cultivation within/under nature forests in Sanchahe

17:00-17:30

Return to hotel

18:00

Dinner

Nov. 21 9:00-16:00

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

16:00

Arrive in Kunming and check in at Golden Spring Hotel

18:30

Dinner at Hotel

## **Brief Introduction to the Field Sites**

### **A Brief introduction to Pu'er Municipality**

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 km<sup>2</sup>. 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.



## **Field sites to be visited in Pu'er City**

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

Time to visit: From 09:30 to 10:00 on November 19, 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 11:00 on November 19, 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 hm<sup>2</sup>, of which 4,267 hm<sup>2</sup> are commercial forest and 4,533 hm<sup>2</sup> 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 hm<sup>2</sup> 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.



### **3. Simao Port and Nuozhadu Provincial Nature Reserve**

Time to visit: From 11:30 to 12:00 on November 19, 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,

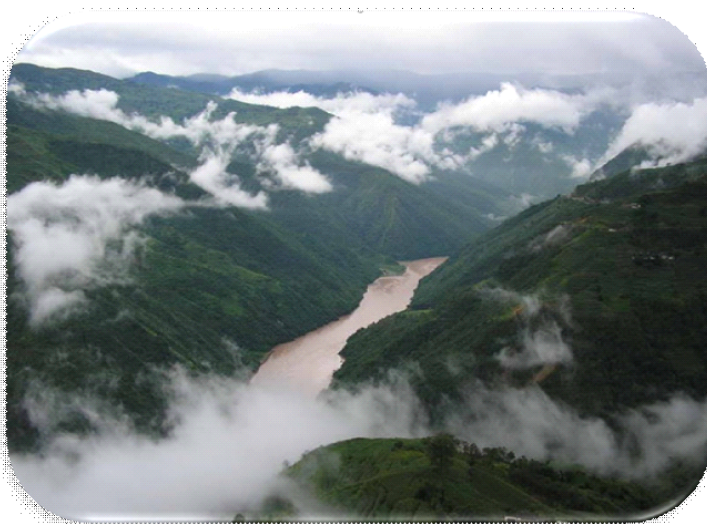
787 km from Luang Prabang in the Laos and 1,260 km from Vientiane, thus enjoying very advantageous geographical positions.

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 km<sup>2</sup> 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 21,679 hm<sup>2</sup>.

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. Biodiversity Science Museum

Time to visit: From 15:00 to 16:00 on November 19, 2012

As one of key prefecture with rich biodiversity resources, a Biodiversity Science Museum has established in Pu'er College, which is the first museum open to public society with the focus on biodiversity resources conservation and utilization, especially the high value economic species, as well as rare and endangered species, some plant and animal species that endemic to Pu'er was also exhibited and displayed in the museum.



#### 5. China's Pu'er Tea Research Institute

Time to visit: From 16:00 to 17:00 on November 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.

## **6. Coffee and Tea mixed agroforestry demonstration models**

Time to visit: From 09:30 to 10:00 on November 20, 2012

The mixed plantations of Coffee under the economic forest was a dominated upland agroforestry model in Dakaihe Village, which invented from traditional shifting cultivation, such as slash and burn or swidden, the total area is around 765 acres with 1.6 acres per villager at average level, and a net income of 3,580 yuan per person has produced from upland agroforestry plantation annually.



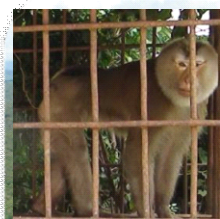
## **7. Caiyanghe Provincial Nature Reserve**

Time to visit: From 10:30 to 11:00 on November 20, 2012

Caiyanghe Provincial Nature Reserve is located in the southeastern part of Simao District in Pu'er Municipality. Covering an area of 14,892 hm<sup>2</sup>, the nature reserve 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. The nature reserve was established in October 1981 upon the approval of Yunnan Provincial Government, the core zone of the nature reserve is 6,747hm<sup>2</sup>, or 45.3%, and the experimental zone 8,145 hm<sup>2</sup>, 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: 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.



## 8. Simao Pin's artificial forests demonstration

Time to visit: From 12:00 to 12:30 on November 20, 2012

Approximately 1,680 acres of demonstration forest is afforested with mixed fast-growing trees which commonly used for timber purpose, such as pine



(*Pinus kesiya*) and birch (*Betula alnoides*). It is a project to explore and demonstrate modern forestry practices and also technologies for more effective and stable timber production models. With this successful demonstration, the forestation model and technique has been popular accepted and

widely replicated in community and individual farmer households nearby.

## 9. Tea plantation based agroforestry practices in Field Museum of Pu'er Tea

Time to visit: From 15:00 to 16:00 on November 20, 2012

China's Pu'er Tea Field Museum, being situated in the background of 1,533 hm<sup>2</sup> 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.

## **10. Agroforestry based High Value Medicinal Herbs cultivation under nature forests**

Time to visit: From 16:30 to 17:00 on November 20, 2012

*Dendrobium spp.* is a type of orchid that traditionally used as herbal medicine. The demonstrated plantation is around 116 hectare, 58 *Dendrobium spp.* has been cultivating in nature forests as major crops besides other high value herb species, and 280 tons of fresh stems and 1 ton of flowers are harvested annually, which has output value of 66.2 million yuan without any destruction to nature forests.



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