

Study Abroad in China – Summer Course

PB495/595: Plant Resources and Ecology in Eastern China A Joined Course with Zhejiang University in Hangzhou

Course Description

Through lectures and field trips to famous mountains, wetland parks, and lakes in eastern China, students will gain skills in field botany and knowledge of wetland and lake ecology, plant biodiversity and its uses in China. The course enhances cross-cultural exchange during this 3 week program by having students from Zhejiang University join the class and visits to famous Chinese gardens, markets, and museums in Shanghai, Hangzhou, and Suzhou cities, as well as visits to villages and the Buddhist and Taoist temples in the mountains.

Program Location

China is among the leading countries in the world in number of people and in plant diversity. Of the world's approximately 250,000 species of vascular plants, 30,000 (12%) occur in China. It is estimated that 6-7,000 of them are used for food and medicine. Species diversity is about twice that of the continental United States, although the two countries are comparable in area (9.6 million square km² vs. 9.4 million km²), and about one third more than in all of North America north of Mexico. The rich Chinese flora contains numerous old and unique lineages and these are associated with a complex topography highly dissected by mountains. China has long been considered to be an important center for plant preservation and an active engine of species formation. Numerous plant species in China have close relatives occurring in the eastern United States, a phenomenon termed the "*Eastern Asian-Eastern North American Floristic Disjunction*" in plant biogeography. This striking intercontinental disjunct distributional pattern has attracted systematic and ecological studies by botanists and zoologists for more than a century. The high mountains in China harbor a major proportion of the plant diversity of China with vertical transitions from tropical/subtropical forests at the foot to arctic plant communities at the summits. Large mountains in China are often associated with temples and are rich in culture ranging from religion to ethnobotany, art, and poetry, among other things.

This course introduces the plant biodiversity of China through field trips to selected famous mountains of eastern China. The course will allow participants to gain a wide range of first-hand knowledge about China, including natural environments, plant resources, people and their customs, religion, history, as well

as scientific knowledge in plant diversity, biogeography, and wetland and lake ecology.

Host University –Zhejiang University

Zhejiang University, one of the top five universities in China, and located in the beautiful eastern coastal city of Hangzhou, will be the Chinese host of the course. Hangzhou is often referred to in China as the "Heaven on Earth," and has been one of the most important cities in the long history of China, both economically and historically. The beautiful West Lake (Xi Hu), Xixi National Wetland Park, Linying Temple, and Putuo Shan (one of the top four sacred mountains of Buddhism in China) attract millions of visitors each year. Hangzhou is only a couple of hours from Shanghai by bus and close to several other famous cities in the east, including Suzhou, which is known for its Chinese gardens, embroidery, and the Mysterious Taoist Temple. Numerous cultural and historical sites are located within Hangzhou and adjacent cities. Most importantly, Zhejiang University is within a two hour drive from several famous and sacred mountains that are rich in plant resources, vegetation, and culture. Among these are Tianmu Shan (Buddhism), Qiyun Shan (Taoism, 35 km from famous Huang Shan), Jiuhua Shan (Buddhism), and Huang Shan (the most spectacular mountain in China). Hangzhou is also ~ 2 hours by bus to Qiandao Hu (Thousand Island/Islets Lake) in southern Zhejiang. These natural resources provide excellent field sites for exploring the diversity of plants, religion and cultures, as well as for studying wetland and lake ecology.

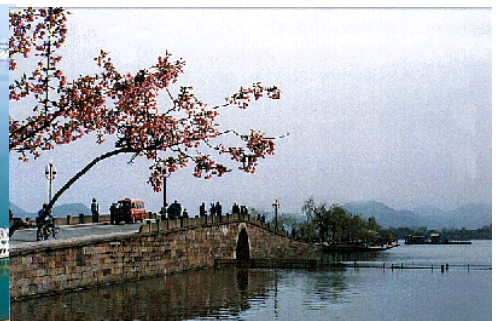
Location in China of Hangzhou City



West lake in Hangzhou



City



Shanghai City



Campus of Zhejiang University



Course

- **Course title:** Plant Resources & Ecology in Eastern China
- **Course No.:** PB 495/595
- **Faculty**

Dr. Jenny Xiang, Associate Professor, Department of Plant Biology, NCSU; native of China, with research focusing on molecular systematics and biogeography of plants, with emphasis on the dogwood group and eastern Asian-eastern North American discontinuous distribution of plants; collaboration with faculty at Zhejiang University and experience in field botany in many areas of China including the mountains of eastern China.

Dr. David Boufford, Senior Botanist, Harvard University Herbaria. A world famous botanist in floristic studies, with extensive field experience in China, Japan, and other Asian countries, in addition to North America. Dr. Boufford is among the most knowledgeable persons in the US on the floras of eastern Asia and eastern North America, and is familiar with both Chinese and American cultures.

- **Time and credit:** 3 weeks, summer, and 3 credits.
- **Description (preliminary):**

This course will examine the natural plant resources of eastern Asia and explore Chinese culture and religion in eastern China. It combines classroom and field exercises. Lectures on plant systematics (*e.g., plant classification, identification, phylogenetic relationships*), plant biogeography (*e.g., origin of the eastern Asian-eastern North American floristic disjunction pattern*), ethnobotany in China, and wetland and lake ecology will be given in classrooms at NCSU and Zhejiang University before the field trips to nearby Xixi National Wetland Park, Thousand Islets Lake, Tianmu Shan, Qiyun Shan, and Huang Shan. Field trips to each of the mountains and adjacent field sites will include visits to temples and/or villages. An equal to double the number of students from Zhejiang University will join the class to interact with NCSU students for nearly the entire period, except on the last two days when the class visits Suzhou and Shanghai. Students from the class are expected to gain skills in field botany, including plant identification, collecting and preparing specimens, knowledge in wetland and lake ecology, plant diversity, plants used in eastern China in comparison with plants used in the United States, as well as experience and knowledge in Chinese culture and religion.

- **Syllabus and preliminary itinerary (Tentative)**

The course will be for three weeks.

1st week:

- Opening ceremony, lectures and labs in classroom and culture activities on campus and Hangzhou
- Xixi Wetland National Park
Day & Evening culture activities may include campus tour, visiting West Lake, Linying Temple, local residents' house, and China Grand Canal night cruise.

Transportation: bus.

Housing: University dorm (double occupancy with desks, air conditioner, fan, and bathroom).

Food: Student's Cafeteria.

Great time for US and Chinese students to get acquainted and for US students to get over jetlag

Quiz 1

2nd week:

- Field trip to Tianmu Shan and adjacent field sites and villages.
- Field trip to Huangshan, Qiyun Shan
- Visiting Buddhism & Taoism temples, culture sites (old villages, resident areas...).

Transportation: Reserved university bus

Housing: in local standard hotel room with bathroom, air-conditioner, and TV.

Food: in group meal in hotel

3rd week:

- Continued fieldtrip in Huang Shan, field trip to Qiandaohu (one thousand islets lake).
- Back to Hangzhou, Quiz 2; visiting Hefang Jie (renovated street with traditional Chinese architectures for shopping)
- Trips to Shanghai and Suzhou, *Shanghai:* Visiting Chenghuangmiao (famous market), and Oriental Pearl Tower for exhibit of Shanghai history and development, Waitan (Outer Bound of Huangpu River), Shanghai Museum of Chinese History, Nanjing Lu (all kinds of stores). *Suzhou* - visiting medicinal plant production company and water melon field on the way, visiting famous Chinese Garden Zhuozhengyuan, and Tiger Hill.

Transportation: Reversed university bus

long history of human activities dating back more than 2,000 years ago. Buddhism, Taoism and Confucianism were practiced over centuries and have contributed to the conservation of nature in the region.

Major habitat & ecosystem types: temperate broadleaf forests or woodlands, Subtropical evergreen broadleaf forest with *Castanopsis sclerophylla*, *Cyclobalanopsis glauca* and *Schima superba*; subtropical evergreen and deciduous broadleaf mixed forest with *Phoebe chekiangensis*, *Ginkgo biloba* and *Emmenopterys henryi*; coniferous forest with *Cryptomeria fortunei*, *Pseudolarix kaempferi* and *Pinus taiwanensis*; agroecosystems with rice, vegetables and Bamboo; forestry ecosystems with mulberry, medicinal plants and tea (*Camellia sinensis*) .

- **Qiyun Shan - Taoist mountain**
Anhui province 3281 ft

Situated in Xiuning County north of Huang Shan Mountain, Qiyun Mountain is one of the four Taoist Mountains in China. It is 1,000 meters above sea level, with 36 peaks, 72 steep cliffs, 16 caves, 24 canyons and spectacular natural views above crystal streams and waterfalls. There are a total of



108 structures housing palaces, temples, halls, pavilions and other buildings with numerous Buddhist sculptures, paintings and monuments (From: <http://www.toueasy.net/html/aboutchina/MountainsRivers/mountains.htm>; www.china-hiking.com/huangshan/pict3.html)

- **Huang Shan – Most Spectacular mountain in China**

see <http://www.shanghai-huangshan.net/about-huangshan.htm>



Safety assessment

Note: This safety assessment was prepared for the 2009 summer course:

PB495/595: *Plant Resources, People, and Religion in China*. It is generally applicable to the 2010 program. Update for 2010 program will be provided to accommodate any emerging concerns.

These field sites are among the top tourist attractions in China. There are well-built roads and lodging facilities at different elevations on the mountains. There are also paved highways from the cities to these mountains. Nearby hospitals are available for emergent care. Local universities, such as Fudan University (Shanghai), Zhejiang University, Zhejiang Forestry University, Eastern Normal University of China, Anhui University (Hefei, Anhui Province), and Anhui Agriculture University (Hefei, Anhui Prov.) regularly take their students to these mountains for practical training in biological courses. These areas have no major safety concerns. However, students should have common sense in precautions for field trips and travel to third world countries. The faculty and field assistants, as well as all Chinese students will have cell phones for emergence communication. . The US Consulate in Shanghai is only about 2 hrs away by bus from Hangzhou. **Students will be registered at Consulate when they arrived in Shanghai** (address: *Main U.S. Consulate General Building, 1469 Huai Hai Zhong Road, (Near Wulumuqi Nan Lu), 200031 Shanghai , China*)

Students will have very little free time at various locations, so they will spend most days together. They will be advised about safety considerations as appropriate before the class disperses in any city, field sites or village, and rendezvous arrangements will always made clear before dispersal. We review safety issues during course meetings at the beginning class orientation, and we revisit travel safety issues before departing and again during the three week excursion.

Arrival and Departure in China: Students in the class will be traveling with the course teaching assistant, Donna Wright on the same flight on May 19th via Continental Airline (with a flight change in New Jersey) and meet the instructors Dr. Jenny Xiang and David Boufford at Pudong International Airport in Shanghai on May 21th, the date of the class flight arrival. There will be people from Zhejiang University with the rental bus in the airport to pick up the class. Departure from China at the end of the course will be depending on students. Most students will depart from Shanghai Pudong International airport directly to the United States on June 9th. Instructor Jenny Xiang will depart from Shanghai on June 11th. Coordinators at Zheda will assist students to purchase tickets should they decide to stay for additional time in China after the program ends.

Living and Study Accommodations at Zhejiang University: Students will stay in the modern and recently built dormitories (2 persons/room with bathroom, ceiling fan, and airconditioner) for foreign students at Zheda.

Housing Accommodations off Zheda campus: While on the excursion outside of Hangzhou, students and faculty will mostly stay in local Inns or hotels. Conditions surrounding accommodations vary from rural or small town to urban locations, but all rooms will have the standard conditions (2 person per room, airconditioner, and bathroom) .

Food Safety: In the area of China we will be visiting, there are few concerns related to eating and drinking, all of which are easily managed. However, Melamine has been found in several products produced in China, including liquid milk, frozen yogurt, instant coffee, coffee creamer, ice cream, chocolate cookies, candies, eggs and more. For a list of affected products in the United States, visit www.fda.gov/oc/opacom/hottopics/melamine.html.

We will ask students to avoid eating milk products or products with milk-derived ingredients made in China.

We will insist that students and faculty drink and brush teeth only with bottled water or adequately boiled water, regardless of location. Every residential facility in China, from the most elegant 5-star hotel to the most basic dormitory, provides its guests bottled water or an electric pot for boiling water. One student is allergic to peppers. We will try to accommodate her needs to the best we can by asking cooks to make her a separate combination dish or acknowledge the student which dishes on the table have peppers.

We will insist that students and faculty only eat foods that have been cooked, or that they can peel themselves. The typical Chinese meal consists of a wide variety of vegetables, meats, and rice or steam bread that are piping hot, many of which will be new to students. Raw foods are rarely encountered.

We will encourage students to schedule meetings with the Student Travel Health Clinic to obtain counseling and the standard travel kit, which includes a variety of over-the-counter remedies for gastrointestinal discomfort.

Transportation: The nature of this course requires mobility to access the mountains, adjacent field sites, and various cultural sites in the cities. We will use hired bus for transportation. Most of these areas have good public transportation, and paved roads.

International: We will travel to China directly from RDU to New Jersey, then to Shanghai via Continental Airline in a class group. Luggage can be checked in directly to Shanghai.

Domestic: We will travel in China by hired bus.

It is NOT safe for anyone not highly experienced with driving in China to operate a motor vehicle. Traffic is always very heavy except in extremely rural areas, and urban roads are jammed with cars, buses, trucks, motor scooters, bicycles, pedicabs, horse carts, and even pedestrians pushing wheelbarrows. The congestion does mean that traffic is generally low speed. There is a modern and lightly used toll highway system that is comparable in quality and safety to the United States Interstate Highway system. Taxi cabs are ubiquitous, safe, and well regulated. Our colleagues at Zheda know the quality of transport companies.

Disease Concerns:

China does not require any vaccinations for entry. However, all participants will be directed to Student Health Services or comparable health services to be evaluated for the following vaccinations:

- Hepatitis A or immune globulin (IG),
- Hepatitis B,
- Japanese encephalitis,
- Rabies,
- Typhoid fever, and
- Booster doses for tetanus-diphtheria and measles.

There were reports of poultry and swine infected with bird flu, primarily in southwest China, last year. Influenza A (H5N1) is a subtype of the type A influenza virus. Wild birds are the natural hosts of the virus -- hence, the name avian influenza or bird flu. The virus does not typically infect humans. In 1997, however, the first instance of direct bird-to-human transmission of influenza A (H5N1) virus was documented during an outbreak of avian influenza among poultry in Hong Kong; the virus caused severe respiratory illness in 18 people, of whom 6 died. Since that time, there have been other instances of H5N1 infection among humans. However, H5N1 viruses thus far have not been capable of efficient human-to-human transmission; health officials continue to monitor the situation closely for evidence of H5N1 transmission between people.

Participants will not be allowed to travel to any area where avian influenza has been reported. Participants will not be allowed to visit any operation where groups of birds or swine are kept in confinement.

Malaria is not a concern in the northern region to which this course is confined.

There is no risk for yellow fever in East Asia.

Emergency Plans: Meeting places will be the lodging for the evening. Every participant will be issued a card that states the name, location, and phone number of the lodging in both Mandarin and English. If someone is inadvertently separated from the group, any taxi driver can use the card to transport them back to the lodging.

Cell phone service is ubiquitous and inexpensive in China, and even remote villagers generally have or have access to these phones. We will carry at least one China Telecom cell phone with us at all times. Every participant will be given a card with this number and instructions in both Mandarin and English on how to contact the group as well as our hosts at Beijing Forestry University. If a student has a Motorola cell phone, it can be used in China (just need to activate it via the cell phone company and purchase a phone card to be inserted into the phone).

There are numerous hospitals in Hangzhou and places close to the field sites. Just to list a few from Hangzhou:

XIHU WOMEN AND CHILDREN'S HEALTHCARE CENTRE OF HANGZHOU

Phone: 0571-88054830

XIHU RED-CROSS HOSPITAL OF HANGZHOU

Phone: 0571-85155222

HANGZHOU XIHU LIUXIA PEOPLE'S HOSPITAL

Phone: 0571-85229026

XIHU PEOPLE'S HOSPITAL OF HANGZHOU

Phone: 0571-87981798

XIHU NO.2 PEOPLE'S HOSPITAL OF HANGZHOU

Phone: 0571-87091050

HANGZHOU ORTHOPAEDICS HOSPITAL

Phone: 0571-85131310

THE FIRST PEOPLE'S HOSPITAL OF HANG ZHOU

The United States Department of State finds that:

Most hospitals in China will not accept medical insurance from the United States, with the exception of the following hospitals, which are on the BlueCross BlueShield's worldwide network providers - overseas network hospitals' list

(<http://www.fepblue.org/wasite/wabenefits/wa-benefitsoverseas04.html>): Hong Kong

Adventist Hospital, Beijing United Family Hospital, Beijing Friendship Hospital, International Medical Center in Beijing, and Peking Union Medical Center. Travelers will be asked to post a deposit prior to admission to cover the expected cost of treatment. Hospitals in major cities may accept credit cards for payment. Clinics, hospitals, and pharmacies abound in China in both the urban centers and rural areas through which we will be traveling. If any student should need to remain behind at any location, arrangements will be made for a faculty member to stay with that student until they can return to the group or evacuation to the U.S. is accomplished. Program participants will be registered with the State Dept: <https://travelregistration.state.gov/ibrs/>. We will keep photocopies of contents of student wallets and contact numbers for credit card companies on file in the department for duration of study tour (and shred along with health information upon return). We will have students scan their passports and email copies to themselves, so that these can be accessed electronically.

Our experience is that it is best to assume that a medical facility in China does not accept Western insurance or credit cards, and that patients are expected to pay upon treatment. Medical care is of good quality and very inexpensive by Western standards. We will carry sufficient cash to pay for reasonable emergency medical care for any participant.

Crime:

The United States Department of State finds that:

Overall, China is a safe country, with a low but increasing crime rate. Pickpockets target tourists at sightseeing destinations, open-air markets and in stores, often with the complicity of low-paid security guards. Violence against foreigners is rare, but the rate of criminal activities against foreigners is growing, especially in the larger cities. Over the past year incidents of violence against foreigners have usually taken place in these urban areas, in bars and nightclubs.

Travelers are sometimes asked by locals to exchange money at a preferential rate. It is illegal to exchange dollars for RMB except at banks, hotels and official exchange offices. Due to the large volume of counterfeit currency in China, unofficial exchanges usually result in travelers losing their money and possibly left to face charges of breaking foreign exchange laws. If detained by police under suspicion of committing an economic crime involving currency, travelers may be delayed for weeks or months while police investigate the allegations.

Throughout China, women outside hotels in tourist districts frequently use the prospect of companionship or sex to lure foreign men to isolated locations where

accomplices are waiting for the purpose of robbery. Travelers should not allow themselves to be driven to bars or an individual's home unless they know the person making the offer. Hotel guests should refuse to open their room doors to anyone they do not know personally.

Our collective experience is that China does in fact have a very low crime rate. Criminals are dealt with harshly and quickly. Illicit drugs are rare because dealers face very harsh punishment. Prostitution is illegal but ubiquitous, open, and unsafe with a rapidly increasing AIDS rate. Participants will be reminded repeatedly that at least in China, the only safe drug use and safe sex is indeed abstinence from both. Alcohol is cheap and abundant, however we will advise all participants that it is best to refrain.

The fact sheet on the following website from the U.S. DEPARTMENT OF STATE, Bureau of Consular Affairs for travelers to the Olympic game in China has additional relevant and useful information:

http://travel.state.gov/travel/cis_pa_tw/cis/cis_1762.html