September 30, 2004

TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Message from the Sino-Eco President</td>
<td>2</td>
</tr>
<tr>
<td>Brief News (简明新闻)</td>
<td>3</td>
</tr>
<tr>
<td>Reports (报告)</td>
<td>4</td>
</tr>
<tr>
<td>Recent Publications (最近发表论文)</td>
<td>14</td>
</tr>
<tr>
<td>Ecological Essays (生态科普)</td>
<td>15</td>
</tr>
<tr>
<td>Ecological Literature (生态文学)</td>
<td>16</td>
</tr>
<tr>
<td>Ecological Photography (生态摄影)</td>
<td>20</td>
</tr>
<tr>
<td>Green Humors (绿色幽默)</td>
<td>21</td>
</tr>
<tr>
<td>Sino-Eco Memberships (会员资格)</td>
<td>21</td>
</tr>
</tbody>
</table>

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A MESSAGE FROM THE SINO-ECO PRESIDENT

Dear SINO-ECO Friends and Colleagues:

I am sure that you and your family had a busy but very productive summer! The autumn is the season for harvesting. Looking back the activities and productivities of our SINO-ECO members reported in this Newsletter, you will be proud to say: Wow, we made it!

First, I would like to congratulate the big success of the *Beijing International and ESA Symposiums on Biological Invasions* and thank the meeting organizers and all participants, particularly our former SINO-ECO presidents Drs. Shili Miao and Xinguo Han, for their dedicated effort, energy and time for making this symposium great successful. Also, the Advanced Ecology Lectures at Fudan University organized by Jiquan Chen and other SINO-ECO members have been greatly successful, Congratulations!

Second, the annual get-together at ESA meeting is our SINO-ECO tradition and the exciting time and wonderful opportunity for meeting old friend and making new friends as well as share information and experience. We had the enjoyable Tour to the World Forestry Center and successful Workshop on August 1 as well as unforgettable get-together party at local Chinese restaurant on August 3. I’d like thank all participants (both senior and new members) for joining these important activities. Also, I would extend my special thanks to Dr. Hong Jiang and his family for their local hospitality. Looking forward to seeing all you in coming ESA meeting in Montreal!

Finally, I would greatly appreciate many of you (both senior and junior members) for your supports for our new Committee during the last few month transition periods as well as your valuable contribution for this issue of Newsletter, specially for our members who worked at very difficult environment threatened by the miserable Hurricanes in Florida and other affected States during last few weeks.

Overall, I am very pleased to see the growth of the SINO-ECO. Let’s work together for the better and stronger SINO-ECO!

Changhui
BRIEF NEWS

- On behalf of the SINO-ECO, we would like to sincerely congratulate and welcome the 34 new members to join us, including:

Yun An; Shuqing An; Anpin Chen; Xiongwen Chen; Qinglai Dang; Ming Dong; Dong Hua; Yayi Huang; Baoming Ji; Jiong Jia; Lin Jiang; Xuyong Li; Hong Li; Meihe Li; Bo Li; Yi Li; Jinxun Liu; Hongyan Luo; Zhiyan Mao; Yuanying Peng; Yonghai Qian; Kiyoshi Sasaki; Fumiko Shirakura; Yahn-Jauh Su; Wengui Su; Huiyu Wang; Gaofeng (Geoff) Wang; Meiying Wu; Shan-Huah Wu; Yuanchun Yu; Tao Zhou; Xiaolu Zhou; Bin Zhu; Qianlai Zhuang. Welcome on board!

- The book of "Global Ecology: Climate Change and Ecological Response", edited by Jingyun Fang (Peking University) and contributed by nine SINO-ECO members including Junda Lin, Guanghui Lin, Jiquan Chen, Wei Fang, Yude Pan, Fang Gao, Qingfeng Guo, Zichen Yu, and Changhui Peng, has been awarded as the third prize by the 10th China Excellent Scientific Books.

- Bai-Lian (Larry) Li was invited to give a keynote lecture entitled ‘Landscape Complexity and Sustainability: Challenges for 21st Century Ecologists’ to the largest European Ecological Society annual conference in Germany on September 13, 2004, right after the opening ceremony. He will also give an invited plenary lecture entitled “Modeling Ecological Complexity: Challenges and Opportunities” in the 4th European Conference on Ecological Modeling, Bled, Slovenia, September 27 - October 1, 2004.

- Dr. Shenglei Fu has recently been selected to join the South China Botanical Garden (SCBG) with the "100-Talents-P plenary lecture in the 4th European Conference on Ecological Modeling, Bled, Slovenia, September 27lan", attached is his please current contact info: Ecological Research Center, South China Botanical Garden, Guangzhou, 510650. Tel: (020) 37252921 (O). Email: fushenglei@hotmail.com. Welcome Sino-Eco members to visit SCBG and collaborate in mutually interested research projects.

- Lixin Wang completed his master degree this summer from University of North Carolina at Greensboro and has recently been accepted to University of Virginia to pursue his Ph. D degree. Congratulations, Lixin!!

- Xuexia Chen has recently graduated from AEWR (Atmosphere, Environment and Water Resources) PhD program of South Dakota School of Mines and Technology (Rapid City, SD), and will start to work at EROS Data Center (Sioux Falls, SD) after September. Her current address is: Xuexia (Sherry) Chen, Environmental Scientist, USGS EROS Data Center, SAIC, 47914 252nd Street, Sioux Falls, SD 57198-0001. Phone: (605) 594-2741, Fax: (605) 594-6529, Email: xuchen@usgs.gov. Congratulations, Xuexia!!
Advanced Ecology Lectures at Fudan University

Jiquan Chen

An advanced ecology lecture series was successfully given to almost 60 junior ecologists across China between July 9 and August 4, 2004. These lectures, which were originally designed for doctoral students, were presented by 8 invited researchers/educators from the U.S. and U.K. As stated in the original proposal to Fudan University who provided 2,250,000 RMB for these tuition-free lectures, our central focus of the lectures would be on the philosophy and methodology in ecological research. With his success in competing for the “ChangJiang JiangZuo JiaoShou” (长江讲座教授) based at Fudan University, Dr. Yiqi Luo convinced the university to bring additional ecologists to promote its growing program in ecology. As a result, Drs. Weixing Zhu, Jiquan Chen, Quan Dong, and Ge Sun visited Fudan in 2003 with great enthusiasm. While mutual interests in initializing collaborative research were frequently the discussion topic, Dr. Jiakuan Chen, Director of the Institute of Biodiversity Science, Fudan University, shared a common vision with Jiquan on the urgent needs for quality researchers in China, and believed that education is the single most important factor for improving China’s future ecology. A proposal was submitted following Jiquan’s return last fall, and was shortly approved by the university. Within the proposal an intensive training program for junior ecologists in China would be organized and fully funded by Fudan University. The goal of this program is to expose students to cutting edge science and, more importantly, research philosophy and methodology. These students can then aid China in becoming on international leader in ecology.

Faculty members from the College of Life Science, including Prof. Bo Li, Zhijun Ma, Huiqin Dong, and Jiakuan Chen, intensively organized these lectures. Three sections of lectures were organized daily: 8:30-11:00 H in the morning, 1:30 – 4:30 H in the afternoon, and 6:30 – 9:30 in the evening. Forty-two students from 26 institutions (10 from Fudan) were officially registered in the lectures, although many others from Shanghai and other regions snuck into the classroom later.

Invited Instructors (alphabetically listed)

- Dr. Jiquan Chen (Chair, University of Toledo)
- Dr. Weixin Cheng, University of California, Santa Cruz
- Dr. Peng Gong, University of California, Berkeley
- Dr. Guanghui Lin, Carnegie Institution of Washington
- Dr. Junda Lin, Florida Institute of Technology

Drs. Peng Gong, Yiqi Luo, Jiquan Chen, and Guanghui Lin at Fudan (7/2304).
Dr. Jianguo Liu, Michigan State University
Dr. Yiqi Luo, University of Oklahoma
Dr. H. Ronald Pulliam, University of Georgia
Dr. Andrew Watkinson, University of East Anglia, U.K.

Lectures
- Experiments in ecosystem biogeochemical cycling (Dr. Weixin Cheng)
- Multivariate Analysis (Cluster analysis, PCA, DFA, ABC, CA, DCA, MDS, CCA, and TWINSPAN) (Dr. Junda Lin)
- Introduction to population biology, including census techniques, asking good questions, designing a project, approaches to population biology, biological control and predation, changing farmland communities, and ecological changes on Caribbean coral reefs (Dr. Andrew Watkinson)
- Peer reviews; and interactions with the media (Dr. Jiangguo Liu)
- Remote sensing capabilities; information extraction strategies in remote sensing; challenges in GIS & RS for ecological studies; and fire mapping with remote sensing and emission estimation (Dr. Peng Gong)
- Applications of stable isotope in ecological research; and methods in ecophysiology (Dr. Guanghui Lin)
- Global change and ecosystem science: implementation of global change research experiments; major issues in global change research; methods to address the specific major issues; and approaches for studying multifactor changes (Dr. Yiqi Luo)
- Development of manuscripts for publication; the fine art of scientific writing: key points; proposal development; the eddy-covariance method in ecology; and spatial statistics in ecology (Dr. Jiquan Chen)

Evening Roundtable and Discussions
- Nature’s giving: ecology of ecosystems and landscapes (Dr. Jiquan Chen)
- Graduate education in ecology (Drs. Weixin Cheng and Junda Lin)
- Graduate education in the US and UK (Drs. Junda Lin and Andrew Watkinson)
- Research in the US & China (Drs. Peng Gong, Guanhui Lin, and Jiquan Chen)
- Integrated ecosystem study (Drs. Yiqi Luo and Jiquan Chen)
- Some thoughts on scientific research and higher education (Dr. Jiquan Chen)
- The practice of scientific writing (Dr. Jiquan Chen)

Seminars
- A soil ecologist's view of the global carbon cycle & environmental change (Dr. Weixin Cheng)
- Ecology and management of mangrove marshes (Dr. Junda Lin)
- Species interactions: mutualisms; Competition (Dr. Andrew Watkinson)
- Predicting the consequences of environmental change (Dr. Andrew Watkinson)
- Scientific writing: an editor's perspective (Dr. Andrew Watkinson)
- Grand challenges in ecology (Dr. Ron Pulliam)
- Integrating ecology with human demography and socioeconomics (Dr. Jiangguo Liu)
- Biodiversity and global change (Dr. Ron Pulliam)
- Ecological effects of household explosion (Dr. Jiangguo Liu)
- Development of Earth System Science in China (Dr. Peng Gong)
- Scaling up in experimental ecosystem science -- changing the way we think about global change research (Dr. Guanhui Lin)
- Ecosystem responses to rising atmospheric CO₂ concentration (Dr. Yiqi Luo)
- Grassland responses to experimental warming (Dr. Yiqi Luo)
- The devils in the experiment details; knowledge gaps for predicting soil respiration (Dr. Yiqi Luo)
Fires, ecology, modeling and visualization (Dr. Jiquan Chen)

At the end of the program six students were elected by their fellows to compete for oral speeches. While all students’ speeches were very emotional and excellent, Lv Nan (吕楠, Beijing University), Guo Guangpu (郭光普, Tongji University), and Xiao Sai (肖洒, Lanzhou University) were clearly the winners. Feedback and evaluations from the 43 students who participated in the final examination and speech competition were enormously positive. Some comments included: eye opening to research and teaching in U.S., great opportunities to meet many leading scientists at one time, wonderful to meet other colleagues across the country, etc. Many constructive suggestions for improvements were also collected, including reduction in lecturing intensity and hours.

An edited book-- Challenges and Solutions to Ecologists -- by Jiquan Chen, Bo Li, Zhijun Ma, and Bin Zhao with 11 chapters based on lecture notes is scheduled for publication next summer by the Higher Education Publisher of China (see more details at: http://research.eecescience.utoledo.edu/lees/books/Fudan/). This lecture series will be continued for the summers of 2005 and 2006.

Contact Dr. Jiquan Chen (jiquan.chen@utoledo.edu) or Bo Li (bool@fudan.edu.cn) for additional information.

Two recent symposiums on biological invasions co-organized by Sino-Eco and Asian Ecology Section (AES), ESA

Shili Miao

In the summer of 2004, Sino-Eco and Asian Ecology Section (AES) ESA play a critical role in co-organizing two important symposiums on biological invasions. One was entitled “Beijing International Symposium on Biological Invasions: Species Exchanges Between Eastern Asia and North America: Threats to Environment and Economy” (BISOBI) held in Beijing in June 6-8. The other was an ESA Symposium entitled “Biological Invasions: Species Exchanges between Eastern Asia and North America” that was held in Portland, Oregon on August 2. These two scientific events generated a great excitement and enhanced exchanges between American and Asian ecologists.
Many Sino-Eco and AES members devoted their time and efforts in the past one and half years, which made the success of the two meetings. In December 2002, during the workshop of “Succession Theory and Ecosystem Restoration” co-organized by Sino-Eco and South China Botany Institute, CAS, a group of Sino-Eco members including Qinfeng Guo, Jianguo Wu, Yude Pan, and Shili Miao met with Xingguo Han and Jianhui Huang to discuss about further collaboration between Sino-Eco and The Institute of Botany, CAS. A decision was made to hold a joint symposium in 2004 co-organized by the two organizations targeting biological invasions, the second largest threat on biodiversity. In August 2003, during the 88th ESA annual meeting, a group of AES members including Young Choi, Harbin Li, Richard Mack, and Shili Miao got together and discussed about the emphasis of biological invasions between North America and Eastern Asia. An agreement was made to 1) AES will join the Institute of Botany, CAS, and Sino-Eco to co-organize the BISOBI, 2) bring a group of outstanding North American ecologists with a wide range of research interests to Beijing for the meeting, 3) bring Eastern Asian ecologists to ESA to deliver symposium speeches in Portland, OR.

With the leadership of Xingguo Han and Ming Dong at The Institute of Botany, CAS, the Sino-Eco, with additional support from the National Science Foundation of China, the US Geological Survey (USGS), and the AES, the BISOBI was held successfully in June, 2004. About 100 scientists from eight countries including China, the USA, South Korea, Japan, and the UK came to Beijing to assess the current ability to predict future invasions by plants, insects, and other animal groups that are faced by each country (details are provided in another report). There were two keynote addresses. Harold Mooney from Stanford Uni. highlighted the need for scientists to develop quantitative tools that managers can use to analyze the extent and the impacts of invasions. Richard Mack from Washington State Uni. noted the phylogenetic, latitudinal, and climatic similarities between China and the USA. The 40 other talks and the posters focused on current patterns of invasion in eastern Asia, the theory of invasions, techniques to manage invasions, and policies to prevent them. To share information from the symposium, contact Shili Miao at smiao@sfwmd.gov for a PDF copy of the abstracts or watch for publication of a set of papers drawn from the symposium as a special issue of Biological Invasions in 2005. In August, three Chinese ecologists, Ming Dong from IB, CAS, Shuqing An from Nanjing University, and Bo Li from Fudan University, went to Portland to share their research on bioinvasions at ESA symposium. These activities built a bridge across the Pacific Ocean to enhance further academic collaborations.
The Beijing International Symposium on Biological Invasions

Wei Fang, Hong Liu, Hong Jiang, Qinfeng Guo and Ben Gu

The Beijing International Symposium on Biological Invasions was held in Wofo Shangzhuang Hotel, Xiangshan, Beijing, during June 8-11. The first morning of the symposium was highlighted by the opening ceremony and keynote speeches. Dr. Xinguo Han welcomed all participants warmly on behalf of the Institute of Botany, CAS, the major host and sponsor of the symposium. Dr. Jianguo Wu improvised an acknowledgement speech based the power point presentation of Dr. Shili Miao, who was the pivotal organizer of this symposium but happened to miss her flight due to the mismanagement of the carrier. Keynote speeches were given by Drs. Harold Mooney and Richard Mark. Group photo was taken by a professional photographer during the coffee break, which procedure had amused most obedient Western participants. The 11 talks given in the first afternoon focused on the comparisons and predictions of transpacific biological invasions. The presentations represented the highest intellectual standard in the ongoing research on biological invasions, although, I later realized that those on the third morning was even more intriguing and thought-provoking. Several dozens of posters were exhibited during the evening of June 8.

The second day of the symposium was much lighter with fewer talks comparing to the first day of program, the presentations were equally well done. The only one academic section of the day was presided by Dr. William Gregg from the USGS. During the section, Dr. Bernd Blossey introduced a new paradigm on invasive plant management which put emphasis on impact rather than individual species removal. Dr. Xie Yan then gave a well-outlined introduction on information management form invasive alien species in China. Mr. Peter Jenkins, a political lawyer from a Washington DC non-profit organization, wrapped up the section with a unique talk on regulatory and non-regulatory policy tools to minimize introductions of invasive species.

At around 10:30 am that day, Dr. Huang Jianhui from the Institute of Botany, CAS, led a cultural tour to the Great Wall and the Ming Tombs which lasted the rest of the day. This event not only provided the meeting participants, particularly those from foreign countries, a good chance to experience the ancient Chinese civilization, but also an
opportunity to interact with one another in a casual way. The day ended with a delicious meal of Mongolian style cuisine.

The topics of the 3rd day switched to the “Invasion processes, mechanisms, and predictions” and “Current and future invasions in North American”. In the morning, talks focused on the mechanisms and process based on the experimental and field survey results. These presentations were “Allelopathy and naïve native: the novel weapons hypotheses”; “Invading species and invasion-resistant communities: some results from theory and microcosms”; “Patterns of exotic species diversity—a window into the mechanisms regulating diversity and a source of insight for conservation”; “Invasiveness as a relative trait: the advantages and disadvantages of having been introduced”; “Explaining and predicting the success of invading species at different stages of invasion”; “Predicting impacts of exotic plant species on ecosystem processes”; “A phylogenetically controlled test of the enemy release hypothesis”; “History, epistemology and the reciprocal relationship between ecology and invasion biology”; “Why is the salt marsh grass, Spartina, alterniflora, an effective invasive species?”. In the afternoon, most of the talks focused on invasions of North American; for example, there were talks on biological invasion in the marine ecosystems, Michigan watersheds and Willapa Bay wetlands, alien plants in natural areas. Talks also included mitten crab, bighead, and silver carp. In the evening, the “Networking, Data Information Sharing” group held a meeting on collaboration on global and regional invasion species information exchange and communication.
The program on the final day was a half day event with focus on current and future invasions in eastern Asia. Speakers were from China, Japan, India, South Korea and the Philippines. Dr. David Boufford of the United States also gave an excellent presentation on naturalized plants in the Hengduan Mountains of China. After the presentation, the selection committee of student poster award and symposium chairpersons Shili Miao and Xinguo Han presented first Sin-Eco Student Poster Awards. The selection committee consisted of Drs. Jessica Gurevitch (chairperson), Peter Alpert, and Dov Sax. The best-poster winner was Qing Wang, (poster title: Competitive interactions between co-occurring native and alien invasive plants under varying growing conditions: A case study of Phragmites australis and Spartina alterniflora) from Fudan University under the supervision of Dr. Bo Li. The symposium culminated at noon time by student awards of poster presentation, summarized reports of the symposium and the network presented by Drs. Dov Sox, Qinfeng Guo, Yan Xie and Annie Simpson, respectively. The symposium was finally ended by the closing remarks from Dr. Xinguo Han.

After the symposium, over 50 participants and family members joined a field trip to Yunnan Province. The tour focused on some major invasive plants and exotic fishes in the plateau lakes of southwest China and provided an opportunity for the participants to experience diverse culture and landscapes in the region. They visited The Kunming Botanical Garden, West Hills Reserve of Kunming, Stone Forest and the Dian Lake. The most impressive scene would be the worsening pollution at the Dian Lake where all was shocked by the green, soup-like water in the lake.
Sino-Eco field trip and workshop at World Forestry Institute, Portland, Oregon, USA

Yufu Cheng

SINO-ECO Sunday (August 1) in Portland was not necessary sunny, but definitely pleasant. What other places can be better than Portland to see trees? Fortunately we have our local host, our current vice-president, Dr. Hong Jiang lead us to the World Forest Institute, Mr. Xie, originally from Chinese Academy of Forestry, gave us a warmly support throughout the workshop and tour (Sincerely thanks to Mr. Xie). On the early morning of September 1st, a group of our members and their loved ones gathered at Inn at Convention Center, everyone enjoyed talking with each other, greeting to old friends and meeting new friends. The group was led by Dr. Jiang to the World Forest Institute (WFI) around 9 am.

In the morning, Ms. Sara Wu, the Director of WFI, gave us a wonderful presentation at WFI. She stated that World Forestry Center’s mission was to educate and inform people about the world’s forests and trees, and their importance to all life, in order to promote a balanced and sustainable future. She then introduced the background information, including history, structure, international fellowship program, program objectives, broad spectra of the projects, international visitors, case study and work with WFI (cost and application). Over 50 Fellows from 17 nations have participated the fellowships program. After the Talk, Ms. Wu led us visit the facilities at WFI, we were amazed at the settings and administration of WFI. If you need more information on WFI, I encourage you to visit the web at http://www.worldforestry.org/

We had a wonderful picnic on site of WFI, thanks to Dr. Hong Jiang again for the wonderful preparation and efforts. His
home-made beef was the most popular food to all the participants. Water melon was great as well. Everyone enjoyed the big lunch.

In the afternoon, as planned, the workshop continued. It began with our current president, Dr. Changhui Peng’s welcome speech. Everyone gave a brief introduction. Our past president, Dr. Shili Miao, gave us a summary on the Beijing International Symposium on Biological Invasions. More information can be found at http://bisobi.sino-eco.org/. We were so pleased to have three outstanding Chinese ecologists from our homeland to give us presentation on ecological researches and education in China. Dr. Ming Dong, from Institute of Botany, Chinese Academy of Science, introduced us the Research Center of Plant Ecology & Biodiversity Conservation, mainly, its structure, research direction, objectives, personnel, Research groups, Field Stations/Botanic Garden, labs in the center, lab projects, lab achievements. More detailed information can be found at http://eco.ibcas.ac.cn/. Dr. Shuqing An updated the ecological research and education from Nanjing University. He mainly introduced the structure of the ecological research, history, faculty and researchers, main projects and ecological curriculum at the university. More information can be found at http://www.nju.edu.cn/cps/site/NJU/njuc/dep/shengming/index.htm. Dr. Bo Li, from Fudan University, introduced the ecological research and education at his university. Most importantly, he organized the first advanced ecological class in China by inviting the famous ecologists from North America and Europe to give lectures on the cutting edge researches in ecology and how to become a successful ecologist. As one of the lecturer to the class, Dr. Weixin Cheng, from UCSC, introduced his experiences during his teaching at Fudan. More information about this class and projects can be found at http://life.fudan.edu.cn/. Drs. Xiaohua Wei, Hong Jiang and Yufu Cheng spoke briefly on the researches in Northeast China, Southwest China and Spectral Network respectively. If interested, please contact them directly.

16th Sino-Eco Get-together at Portland

Xiaohua Wei

On the evening of August 3, our newly-elected Sino-Eco president Dr. Peng Changhui invited all the Sino-Eco participants to have a getting together dinner party at one local Chinese restaurant in Portland. As unexpected, a total 69 people including 6 former Sino-Eco presidents, senior members and two dozens of new faces came to the party. The great turnout indicates continuous growing of the Sino-Eco. Dr. Peng made an opening remark by welcoming everyone and introduced the new Sino-Eco committee. He further thanked former presidents and members for the solid foundation built for the Sino-Eco, and looked forward to working with all members to move the club further. The party was filled with laugh, love and excitement.
Sino-Eco’s first president, Dr. Jianguo Liu (left) and current president, Dr. Changhui Peng.

Wow, what a big group!

Dinner gathering

Cheers!

RECENT PUBLICATIONS (最近发表论文)

Hong Jiang


Changhui Peng


**Xuexia Chen**


**Bai-Lian (Larry) Li**


**Zhong Chen**


**Ben Gu**

合作探索中美两国之间有害植物的‘互侵’之谜

美国北卡罗来纳大学教堂山分校 奚为民 伊利诺斯州立博物馆 钱宏

中国和美国之间有害植物的相互‘入侵’现象是近年来国际生态学界，特别是中美两国植物生态学家们十分关注的问题。例如，美国早年引入原产中国和日本的葛藤保持水土，但葛藤目前成为公害。而原产美国的普通豚草和三裂叶豚草近年来也在我国广泛蔓延，造成很大的农林经济损失。搞清中美两国之间有害植物‘互侵’的现象和形成原因可为有效防控有害入侵植物的扩散提供理论依据，并对搞清东亚和北美之间更大范围的植物物种交换和互侵提供研究例证。

中国和美国的国土面积分别为960和940万平方公里。中国大陆的纬度约在北纬18° - 53°之间。美国本土的纬度约在北纬25° - 49°之间。相当面积和相近纬度使得中美两国的自然地理环境比较相似。长期的环境演化和生物适应形成了两国之间较近似的植被并拥有众多的共同的植物科属。据研究，中国和美国分别有维管植物370和319科，3230和2325属。其中共有的植物科属中有一些相同的植物种或相近的‘姐妹种’。

尽管地域上相隔很远，生态环境和植物物种特性的相似性给植物的交换和互相引种提供了有利的自然背景。历史上中国和美国都从对方成功地引入过不少植物用于改良农作物品种，绿化园林和保持水土。但是部分引入的植物逃逸到自然植物群落中，在适宜的自然环境中快速繁殖，泛滥成灾。特别是近些年，由于中国和美国的经济贸易交流和人员往来日益频繁，一些有害植物也无意地被带入并蔓延开来，造成两个国家都遭受了很大的经济损失，导致了严重的生态问题。

环境条件和历史因素综合决定了一个地区的植物种类。其中气候和地形在很大程度上影响着植物的自然和可能的分布。中美之间在环境和物种上的相似性是否对目前发生的植物‘互侵’现象有诱导作用？已经入侵的有害植物是否会扩大其蔓延的范围？中美自然环境在一定程度上又有较大差异，这种生态相异性对中美之间的植物‘互侵’现象有什么影响？围绕这些问题，我们与美国生态学家合作开展中美东部环境生态的相似性和相异性对植物物种交换和互相侵入的影响研究。我们首先重点分析十几种原产中国但现已成为有害入侵植物在美国东南部特别是在北卡罗来纳和南北卡罗来纳地区的分布，然后依据各种资料确定那些原产中国或美国但现已成为有害入侵植物在中美环境的相似性较大的东部森林地区的地理分布范围，再进一步运用详细的气候和地形等生境相似度指标模拟和推测这些有害入侵植物的可能扩散范围和潜在的危害。

有害生物物种入侵是目前国际生态学的研究热点之一。随着全球经济一体化步伐的加快，国际国内贸易往来的大规模发展，生物入侵问题日益突出，已成为一个受到国际社会广泛关注的全球性问题。全球受外来生物物种入侵影响较大的国家的政府纷纷投入大量经费支持生态学家研究有害生物物种入侵的原因和防控办法。防控有害生物物种入侵需要政府有关部门的相关领域科学家的共同努力和合作。加强中国和美国以及北美和东亚之间物种交换和植物‘互侵’的研究有助于搞清不同地理区域之间植物‘互侵’的原因，促进有效防控有害植物入侵工作。

要自然还是要农业？

加州资源署 黄长志译

美联社报道：

水，对加州和加州人来说，是十分宝贵的。水，可以饮用，可以灌溉，也为鱼类提供生存和繁殖的空间。很多居住在中央山谷的居民知道联邦法官上周作出的裁决之后，都表示相信圣华昆河水惹起的问题，还要纠缠一段很长时间。至于能否解决，尚是未知之数。
五十多年前，联邦政府兴建了富拉恩大坝（Friant Dam），截断了圣华昆大河九成的河水，把往日充满三文鱼的一条大河转变成为一个发电厂和一个供水系统，灌溉了美国一些农量最高的耕地。

上周，卡尔顿法官在沙加缅度(Sacramento)联邦法院中认同维护自然资源委员会的看法，认为兴建和管理富拉恩大坝的联邦开拓署(Bureau of Reclamation)违反了加州法例，没有让足够的河水流到水坝以外的河床，让河鱼可以继续生存。现在河道还有水，但是水量太少，只足以提醒当地居民，水坝建成后所失去的野生生态环境。

水坝是一九四九年建成启用的。在卡尔顿作出裁决前的几十年，这一个大坝把圣华昆大河和其他河流的河水挡着。这些河流把内华达山脉溶解的积雪带下来，以前从山上流到山下，流过山谷，一直流入三藩市海湾。中央山谷的夏天天气酷热而干燥，每年平均降雨量只有十英寸，气温随时可以维持在华氏一百一十度或以上。中央山谷的东西是种植蔬果果仁的园地，有葡萄，橙，杏仁等，全部都是一年四季都需要灌溉的。果园由圣华昆河水灌溉。而圣华昆河水就由富拉恩水务局管理。这一个计划规模可不小，要为占地共一百万亩的一万五千个果园提供用水。

“这是一个务农的山谷。”富拉恩水务局的食水及环保经理玛利亚说： “很多工作都是和耕种拉上关系的。今次要视乎法官的裁决。决定会对山谷的经济有着举足轻重的影响。因为圣华昆河的河水，所以我们成为美国首屈一指的耕种首都。如果没有了灌溉的河水，我不敢想象情况会是怎么样。”

但是如果河水完全由耕种业使用的话，河流就不会像往日一样，带着积雪从山区流入大海。圣华昆大河以前有着太平洋海岸一带最大量的大鳞三文鱼。但是大坝建成后彻底改变四周的环境。

ECOLOGICAL LITERATURE (生态文学)

一古典诗词一

【水调歌头】
（宋）苏轼

丙辰中秋，欢饮达旦，大醉，作此篇，兼怀子由。

明月几时有？把酒问青天。不知天上宫阙，今夕是何年？我欲乘风归去，又恐琼楼玉宇，高处不胜寒。起舞弄清影，何似在人间？

转朱阁，低绮户，照无眠。不应有恨，何事长向别时圆？人有悲欢离合，月有阴晴圆缺，此事古难全。但愿人长久，千里共婵娟。

PAGE 16 OF 21
【卜算子·咏梅】

（宋）陆游

驿外断桥边，寂寞开无主。已是黄昏独自愁，更著风和雨。无意苦争春，一任群芳妒。零落成泥碾作尘，只有香如故。

-杂文-

中国动物各阶级分析

·沙叶新·

阶级无往不在，中国的动物也是分阶级的。你信不信？你不信，我信。动物之中，谁是我们的朋友？谁是我们的敌人？这是动物革命的首要问题。我们要分辨真正的敌人，不可不将动物社会各阶级作一个大概的分析。龙和凤是动物界最高的统治阶级，其地位甚至要高过人间的皇帝和皇后。中国的皇帝要着龙袍，皇后要戴凤冠，这都是帝王借龙凤的光，是对龙凤的迷信，是对龙凤的崇拜，也使得歌迷要把歌星的尊容印在 T 恤上、“文革”中大家要戴毛主席像章一样的道理。至于皇帝的相貌叫龙颜、皇帝的风度叫龙章、皇帝的宝座叫龙椅、皇帝的子孙叫龙孙、皇帝未即位时叫龙潜、皇帝死了叫龙御宾天等等，都是迷信的升级，都是崇拜的泛化。大象是宰相，这有中国象棋为证，黑子是“象”，红子是“相”，权力相等，级别一样，可见“象”便是“相”，是相国，是丞相。大象是文臣，老虎就是武将，所以只有说“虎将”的，没有人说“猫将”、“狗将”。这是陆军。在水军里，螃蟹是当将军的，虾是当兵的，所谓“虾兵蟹将”。以上都是统治阶级，是剥削阶级，它们始终站在帝国主义一边，是极端的反革命派。

牛和马是贫下中农，是劳工阶级，它们是革命的主力军，是要革龙和凤的命，要造象和虎的反的。可惜牛和马至今也还没有革命，千百年来一直在做牛做马，甚至过着牛马不如的生活。猴子呢？按照它们的经济地位及其对革命的态度来分析，有点近似流浪无产者。它们在各地都有秘密组织，如在“花果山”等地，拔棒竖旗，占山为王。处置这一批猴爷，是动物社会的困难问题之一。它们很能勇敢争斗，今日欢呼孙大圣，金猴奋起千钧棒，都说明它们很有些造反精神，但也有破坏性，如引导得法，可以变成一种革命力量，一些人间的革命导师也并不讳言在自己身上有“猴气”，这样的坦言使人们对导师发动和领导的政治运动的破坏性就容易理解了。其实这也并不奇怪，恩格斯早就说过，人的身上至今还残留着兽性，所以世界有战争，有政治运动；我想人身上的兽性是政治仿生学的生物基础。

蚂蚁是什么阶级？蚂蚁是“蚁民”，当然是草根阶级。虽属“群众”，但从来就不是真正的英雄。蚁民千万不要自作多情。所谓蚂蚁搬泰山，谁见过？那是神话，不足信。要真正地让“蚁民”当家作主，必须在动物社会进行政治体制改革，但也不行，蚁民素质太差，大部分是文盲。

蜜蜂的情况较为复杂，阶级分化严重。大多数工蜂，终日辛劳，采花酿蜜，极少数雌蜂蜕化变质，当了女皇，脱离工农本色，作威作福，贪污腐化，专制独裁。另有部分雌蜂，因追求刺激，贪图享乐，最根本的还是受了西方蝴蝶的思想腐蚀，一并成了狂蜂浪蝶；但动物界不“扫黄”。

对狗的争议最大，是友是敌，中外评价极不一致。但中国的狗绝对不是什么好东西，是地地道道的“狗”，它们或吠月，或吃屎，或挂羊头，或续貂尾，或仗人势，或拿耗子，形象极为不佳。总
之，中国对狗的评价甚低，诸如，狗眼看人低、狗嘴里吐不出象牙、狗咬吕洞宾——不识好人心等等，几乎无一足是，连骂人都骂“你这狗日的”、“你这狗崽子”，可见狗在人们心目中的印象之坏。10年前，我在上海文化局讨论文人下海、以商养文。与会者有我一个同学，他在此之前已经以商养文，办了一个养狗场，成绩很大，令我敬佩。我在发言中毫无恶意地开了个玩笑，我说，“我们至今还在吃皇粮，是官养的，而你已经是狗养的了！”他听了很生气。如果他办的是养鸡场、养兔场，我说他是鸡养的、兔养的，他也许不会介意；说狗养的，他就生气，可见狗这个东西绝不是好东西。后来狗儿爷们或因丧家，或因落水，大都成了走狗，成了狗腿子，成了统治阶级的帮凶。不过也有时来运转，成了狗头军师的，成了幕僚，那是高级帮凶。西方的狗由于经济地位的不同，它们的阶级属性和中国的狗大不一样。西方的狗是宠物，它们已经进入西方的主流社会，彻底变修了。首先，西方的狗早已经不吃屎了，这就从根本上改变了狗性；它们吃罐头，有专门的狗食，营养极高。非但如此，美联社今年6月的一条电讯说：“纽约的狗享有和它们主人同等的福利，像鸡尾酒派对、豪华轿车、专职律师、私人医生、心理咨询、形象设计、美容美发以及修剪指甲……不一而足。曼哈顿‘RUN SPOT INC．’的经理达西亚指出：‘有时我觉得狗比它们的主人生活得还要好。’这家爱犬服务中心每天照料大约70只狗，依照狗的体形大小，收费15至19美元不等。史皮尔是‘DOGGY STYLE’狗专车的司机，每日载着白手套驾着加长型的轿车接送狗儿，在曼哈顿来回一趟，并有20分钟的等候时间，索价40美元。”

西方人将狗当作自己最好的好朋友。美国第一夫人是希拉里，美国的第一狗是Buddy，这是一条小狗，Buddy意译是伙伴的意思，音译可译为“把兄弟”和“把弟”，音意兼顾，译得极妙。克林顿将狗叫作“把弟”，那克林顿自己就是“把兄”了。总统和狗称兄道弟，说明西方的狗不但享有充分的狗权，也享有人权。所以对中国动物的各阶级分析，不适合西方，国情不一样哟。

1998、9、24 上海善作剧楼

（原载《新民晚报》）

一散文一

飓风在佛罗里达登陆

据记载，飓风（Hurricane）这个名字来自于古代中美洲一个土著部落的一个名叫Huracane的魔鬼。飓风在东太平洋和中国海称为台风，在印度，孟加拉和澳大利亚则称为暴风或旋风。飓风分五级，最大时速达155英里或将近80米/秒。试想想我们把100米跑出9.8秒的约翰逊称为飞人。一个飓风从诞生至消亡，其总能量相当于10个核弹！请注意当年美国用一个原子弹就把日本的广岛彻底摧毁。

1992年，四级飓风“安德鲁”在佛罗里达南部登陆，把小镇侯母斯特德（Homestead）夷为平地，造成26人死亡，经济损失达199亿。自此以来，大飓风似乎都故意躲开佛州半岛。尽管每年飓风季节都
有低级飓风和热带风暴骚扰，毕竟是小打小闹，未成大害。

今年8、9两个月的6个星期间，佛罗里达州受到4个等级相当的飓风袭击，上一次一个州在一个风
季受到4个飓风袭击是在1886年，地点是德克萨斯州。但是，佛罗里达州至今已经迎来了4个飓风，而飓
风季节要到11月底才结束。

今年飓风结队而行，打头阵的是飓风“查理”。“查理”沿着佛罗里达的西部沿路一路狂奔，在美国当
地时间8月13日下午在佛罗里达州中部登陆，然后掉头往东，至奥伦多后又转向北卡罗莱纳州。飓风登
陆时风速为每小时145英里，卷起了4米多高的巨浪，一些房屋的屋顶被掀掉，全州约有100万户家庭
失去电力供应，23人丧生。

三周后，飓风“福兰希斯”从东部沿海袭击佛罗里达。 “福兰希斯”步履缓慢，以每小时10数英里的
风速在海上移动，9月4日在中南部的圣露斯登陆才加快步伐，时速达100英里，5日深入佛州内
陆，狂风夹着暴雨吹掉屋顶，拔起树根，造成400万人没电可用。“福兰希斯”风力2级，但覆盖面
大，当局敦促280万人疏散，这是佛州历史上规模最大的疏散行动。这个长周末是劳工节周末，但受飓
风影响，包括机场、游乐场等多数设施都关闭。

1周后，飓风“伊万”步“查理”的后尘，沿着佛罗里达的西部沿海南上，但并没有在中部转向，伊万的
前锋15日给佛罗里达州带来了强风和凶猛的海浪。不过幸好“伊万”剑锋一转，直奔路易斯安那州、密西
西比州、亚拉巴马州、佛罗里达州沿海地区的近200万居民被下令疏散，造成20人死亡。

正当“伊万”还在德克萨斯州发泄余威时，已在海地造成近2000人死亡的飓风“珍妮”，在北加勒比
海徘徊多日后，9月24日晨开始向西移动，于25日半夜在夜色的掩藏下从佛罗里达州东海岸以每小时
120英里的速度登陆。位置与三周前“福兰希斯”登陆的位置相差仅仅几个英里！美国佛罗里达州东海岸约
80万名居民再次接到灾难警报，要求他们撤离家园。 “珍妮”与“福兰希斯”不同，来也匆匆，去也匆
匆，几天后的狂啸后，旋即离去。“珍妮”造成160万人无电可用，6人死于非命。

我住在佛罗里达州东南部的棕榈滩，亲眼目睹飓风带来的灾难。“福兰希斯”和“珍妮”到来之前，黑
云当空，遮天蔽日，有如世界末日来临一般。因此人心惶惶，商场里的罐头食品，瓶装水，电池和挡风
板被抢购一空。我是三十六计，走为上计。携妻挈子，望风而逃，到佛罗里达州西岸亲戚家里避风去了。
公路上汽车如蚁，加油站排长龙。有人北上亚特兰大，10小时的路程走了一天，光是排队加油就花了6
个钟头。飓风登陆的时候，电源和电话都中断。据坚守家园的同事和朋友说，飓风经过时，山呼海啸，
房屋摇动，极其恐怖。几天后我们驱车回来，疮痍满目。满城树木，备受摧残。有的被拦腰截断，最能抗风
的是棕榈树，一杆擎天，无枝无桠，阻力最小。最惹风的是橡树，枝繁叶
茂，常常被连根拔起。即使是百年老树也难于幸免。“木秀于林，风必毁之“。飓风过后，倒毙的树木
堆积如山。平日吱吱喳喳的小鸟，如今了无踪影。回来路上，我还看见一条鳄鱼死在路旁。这些水中之
王可能没想到竟然丧身于飓风的无形之手。一些房屋的屋顶的瓦片被吹掉，或房顶被大风掀开。屋内之
物，暴露无遗。许多家庭游泳池的网罩被吹成碎片或整个倒塌。一池绿水，可怜兮兮。大街上电线杆子
东歪西倒，有些交通灯被吹的无影无踪，幸存的大部分不工作，交通因此一片混乱，警笛长鸣。许多城
市实行宵禁。有人趁风打劫。光是西棕榈滩警方就逮捕了几百名歹徒。
最可怜的是城里的居民，由于停电，夜里一片漆黑。熬过了黑夜，炎炎的白天到来，没有冷气，没有冰块，酷热难当。烦躁的人们大骂“福兰希斯”和“珍妮”，然后骂供电公司，骂他们拖拖拉拉，尽管供电公司从外州雇来数千名维修人员，日以继夜地工作。但是许多家庭1个周以后，少数两周后才重见光明。有人还走上了极端。据当地报纸报道，有一患重病的母子俩，不堪疾病和飓风的双重折磨，在车库里把车的引擎启动，两人因吸入过量的一氧化碳而身亡。飓风“珍妮”直接造成6人死亡。有两人在开车时掉进一个湖泊遇难，一名15岁的男孩被倒下的大树压死，一名男子因触摸了淹没在水下的电线而电死，还有一名男子是在棕榈湾的一个壕沟里被发现的，警方称，他显然是被淹死的。另外一名遇难者则是被涌入家中的洪水淹死的。相对于这些死者而言，我们这些活着的人是万幸的。

据报道，为了应对飓风连续袭击造成的损失，美国联邦紧急管理署启动了有史以来最大规模的救灾援助工作，这次援助甚至超过了1994年加州北里奇大地震和“9·11”恐怖袭击事件发生的救援规模，共有3000多名国民警卫队士兵被派往佛州救灾。“查理”、“福兰希斯”、“伊万”和“珍妮”已在美国造成近78人死亡。美国风险评估公司预计，佛州因此遭受的损失大约为250亿美元。五分之一的住宅受到不同程度的破坏，不但当地居民损失巨大，保险公司也叫苦连天。佛州南部的中小学因“福兰希斯”而关闭了一周，这次又因“珍妮”再停课一周。

四次飓风带来的农业损失达60亿美元。佛罗里达盛产柑橘（citrus orange），今年却被飓风一扫而光。生态环境损害惨重。自然景观不堪忍睹。昔日美丽的海岸被飓风卷起的海浪蹂躏得支离破碎，沙滩上布满垃圾，挺立的棕榈树只剩下一根根光杆…

风生于海。海水升温时，遇上雷雨交加，空气遇热而上升，到了高空冷却下降，再上升，下降，如此循环反复，便可能形成飓风。今年飓风频繁，是否与全球变暖有关，值得研究和深思。（古滨河于西棕榈滩）
ECOLOGICAL PHOTOGRAPHY (生态摄影)

Blackfaced vervet monkey in Ngorongoro Crater, Tanzania (photo by Quan Dong).

A view of Grand Canyon, (photo by Frank Chang).

GREEN HUMOURS (绿色幽默)

老鼠：我现在正和蝙蝠谈恋爱，以后孩子们就生活在空中，不怕你们猫了。猫冷笑一声，指着树上的猫头鹰说：看见没有，她已经怀上我的孩子了！

医科大学的微生物教研室，与寄生虫教研室业务往来较多，教研室之间打电话经常听到这样的对话，“喂，你是微生物吗？我是寄生虫呀”。

老师：“如何分辨章鱼的手和脚？” 学生：“请它弹钢琴，按键盘的就是手，踩踏板的就是脚“。

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