



## KUNMING INSTITUTE OF BOTANY CHINESE ACADEMY OF SCIENCES

# CENTER FOR MOUNTAIN ECOSYSTEM STUDIES

### SHORT COURSE

# **Conserving Connectivity**

一只蜂酿不成蜜,一颗米熬不成粥 The whole is greater than the sum of its parts: The role of corridors in conserving biodiversity

Dr. Paul Beier Regents' Professor, School of Forestry, Northern Arizona University, Flagstaff AZ, USA

> Monday-Friday 2-6 December, 2013 9:30 - 11:30am

#### Seminar Room 4th floor, North Research Building (科研北楼四楼) ICRAF/Centre for Mountain Ecosystem Studies

**Course Description:** This short class will help you understand conservation biology and the science of connecting fragmented landscapes back together for climate smart conservation. Right now, the trend in China and all over the world is to protect nature reserves and develop much of the rest of natural habitat. But this creates problems for many animals and plants that must move in a much warmer planet - how can they get across urban areas, plantations and other unfriendly habitat to move from one protected area with suitable living conditions to another? In this class, we will discover the answers to this question. Come join us- details below!

2 December: **Why conserve connectivity?** We will discuss fundamental principles of conservation biology as they influence scientific protected area design. Connectivity is good, but we will learn about the potential bad effects of corridors and discover that there is no evidence for these hazards.

For more information, visit the KIB website at: www.kib.ac.cn

Please Register with: Mr. Guo Liang, Tel:18287187658, email: guoliang@mail.kib.ac.cn





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3 December: **Do corridors work?** We will examine evidence that corridors increase plant and animal movement between landscape patches. Although these findings strongly suggest that corridors are a good conservation strategy, we will examine arguments for more studies of how well large corridors work in urban and agricultural landscapes.

4 December: **How do we model connectivity?** Models help us to design corridors and connectivity. We will learn how the 3 top models work and are used: least cost models, circuit theory models, and graph theory.

5 December: **How can we use models in conservation planning?** We will explore the 3 tools that managers need to protect corridors. First, they need regional connectivity maps that depict the important corridors in a large region. Second, they need detailed plans to conserve or restore specific corridors. Finally, they need tools to help them make good compromises when corridor designs are implemented in the real world.

6 December: **How can we design corridors for a changing climate?** Climate envelope models attempt to show how each species might track suitable habitat space across the changing landscape. We will discuss why these models are hopelessly risky, and will explore alternatives that might work better.

**Paul Beier** is a professor of conservation biology and wildlife ecology at Northern Arizona University, USA. He has studied how animals use habitat corridors to move through agricultural and urban areas. He has co-authored 22 book chapters and peer-reviewed publications related to wildlife corridor design, state-wide corridor maps for the US states of California and Arizona, and a national framework for wildlife corridors for the government of Bhutan. He has also produced 60 detailed linkage designs in Arizona & California; these plans are being implemented to create networks of protected areas. In his spare time he likes to dance, hike, work in the garden, and eat Chinese food.

#### ALL WELCOME

pdf's of all readings will be provided in advance.

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