

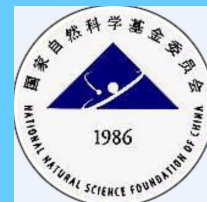
第七届现代生态学讲座

The 7th ISOME: International Symposium on Modern Ecology

第四届国际青年生态学者论坛

The 4th IYEF: International Young Ecologist Forum

第二轮通知



时间：2013年6月9-15日

地点：中国 广州 燕岭大厦

地址：广州市天河燕岭路29号

**第七届现代生态学讲座
第四届国际青年生态学者论坛**

关键日期

活动	开始日期	截止日期	备注
学员注册	2013年3月1日	2013年5月15日	
李博院士研究生论文奖 (提交墙报)	2013年3月1日 (先提交摘要)	2013年4月30日	须参加会议并展出研究墙报
阳含熙院士生态学奖 (口头报告)	2013年3月1日 (先提交摘要)	2013年4月30日	须参加会议并作口头报告
青年论坛论文	2013年3月1日 (先提交摘要)	2013年4月30日	
青年论坛报告人受邀通知		2013年5月15日	
大会报到(全天)		2013年6月9日	

会议日程安排

6月	9日	10日	11日	12日	13-14日	15日
上午	报到, 缴 纳注册费	开幕式	特邀讲座	特邀讲座	野外考察 (鹤山森林生态 站、鼎湖山国家 自然保护区)	离会
下午		特邀讲座				
晚上		青年论坛	青年论坛			

承办单位

1) 主办方

现代生态学讲座系列组织与学术委员会 Organization and Scientific Committee of International Symposium on Modern Ecology Series (ISOMES)

中国生态学会 Ecological Society of China

国际青年生态学者论坛组织与学术委员会 Organization and Scientific Committee of International Young Ecologist Forum (IYEF)

2) 承办方

中国科学院华南植物园 中山大学 广东省生态学会 中华海外生态学者协会(Sino-Eco)

会议主题

会议主题：全球变化背景下退化生态系统恢复的格局与过程

主要议题：(1) 生态系统对全球变化的响应与反馈

(2) 全球变化与土壤生态过程

(3) N 沉降对生态系统的影响

(4) 退化生态系统恢复与重建

(5) 生态系统管理与生态过程

(6) 全球变化模型模拟和尺度推绎

青年论坛：(1) 全球变化生态学 (2) 恢复生态学

论文摘要和海报征集

大会组委会将公开征集青年论坛口头报告人及墙报报告人，在围绕全球变化生态学、恢复生态学的基础上，可以开展各类研讨。有意者请将您的论文摘要或海报发于大会秘书处 lizhen2011@scbg.ac.cn。

论文摘要模板格式如下：

标题： Highlights and perspectives of soil biology and ecology research in China

作者： Fu, Shenglei¹; Zou, Xiaoming^{2,3}; Coleman, David⁴

摘要： As seen for the publications in several distinguished soil related journals, soil biology and ecology is booming in China in recent years. This review highlights the major findings of the soil biology and ecology projects conducted in China during the past two decades. Special attention is paid on the responses of soil biota to environmental change, and the roles of soil functional groups in C transformation, nutrient cycling and pollution remediation. We also point out the future challenges facing the Chinese soil biologists and soil ecologists. In the future, more systematic studies rather than scattered case studies are needed, more controlled field experiments rather than short-term laboratory studies should be encouraged. Besides, we need to focus more on the linkage between aboveground and belowground organisms, the interactions between different groups of soil food web, and the coupling of observation with modeling. It is essential to employ the state-of-the-art technology in research of soil biology and ecology because to answer the emerging scientific questions relies heavily on the development of new technology. Our ultimate goals are to push forward the research on soil

biology and ecology in China and to encourage the interaction and collaboration between the international community and research groups in China.

关键词: China; Belowground; Rhizosphere; Soil fauna; Soil organisms; Soil food web


通讯作者地址: Fu, SL (通讯作者), Chinese Acad Sci, Inst Ecol, S China Bot Garden, Xingke Rd 723, Guangzhou 510650, Guangdong, Peoples R China.

电子邮件地址: sfu@scbg.ac.cn

论文作者单位:

1. Chinese Acad Sci, Inst Ecol, S China Bot Garden, Guangzhou 510650, Guangdong, Peoples R China
2. Chinese Acad Sci, Xishuangbanna Trop Bot Garden, Kunming 650223, Peoples R China
3. Univ Puerto Rico, Inst Trop Ecosyst Studies, San Juan, PR 00936 USA
4. Univ Georgia, Odum Sch Ecol, Athens, GA 30602 USA


海报展板格式如下:



CAP LTER
Central Arizona Project
Long-Term Ecological Research

Effects of land cover transformations on surface microclimate along an urban-rural gradient in Phoenix

Alexander Buyantuyev, Jianguo Wu, and Yun Ouyang
School of Life Sciences, School of Sustainability, Global Institute of Sustainability, Arizona State University, Tempe



Arizona State University
Phoenix, AZ

RESEARCH PROBLEM

Transformations of desert and agricultural lands into urban and covers in Central Arizona alter the surface energy balance and generally increase sensible heat flux to the atmosphere. Locally, irrigated and irrigated urban patches increase latent heat exchange and reduce temperatures. The net effect of urbanization is the rural-urban differential (the Urban Heat Island (UHI)) characterized by warmer minimum nighttime temperatures within the urban core area. In this study we assess the magnitude of the surface UHI in Phoenix and explore its seasonal and diurnal characteristics using ASTER (Advanced Spaceborne Thermal Emission and Reflection Radiometer) satellite data. We analyzed the effects of land use and cover dynamics on surface microclimate using Landsat satellite data (1985-2005). Key parameters (vegetation cover, soil moisture, surface temperature) were estimated from Landsat images and related to major land cover transitions in the area.

DATA AND METHODS

- 1) ASTER spectral and thermal images:
 - June 2003 and October 2003 land cover maps are produced using Decision model applied to the Level 1B data and auxiliary GIS layers. Natural vegetation classes are the result of merging final classifications with the USGS GAP provisional land cover map.
 - ASTER normalized difference vegetation index (NDVI), a proxy for vegetative cover, is computed as follows:

$$NDVI = (NIR-RED) / (NIR+RED)$$
 where NIR is the near-infrared spectral channel, and RED is the visible red spectral channel of the sensor.
 - 2) Landsat TM and ETM+ images:
 - CAP LTER land cover classifications (1985-2005) used to identify locations and cover changes.
 - Surface kinetic temperature grids are produced as part of the atmospheric correction in ATCOR2 module for Envisat images.
 - Temperature grids are normalized as follows:

$$OT = (Ts - Ta) / (T_{soil} - Ta)$$
 where OT = scaled surface temperature, Ts = surface temperature, Ta = ambient air temperature, T_{soil} = temperature of dry, bare soil in a given image.
 • NDVI (same as above)
 • Normalized Difference Wetness Index (NDWI), a proxy for available surface moisture, is computed as follows:

$$NDWI = (NIR-SWIR) / (NIR+SWIR)$$
 where SWIR is the shortwave-infrared channel.

Table 1. List of satellite images used in the study

Image	Date	Clouds (%)	Temp (K)	Humidity (%)
ASTER	2003-06-01	0	300	65
ASTER	2003-10-01	0	300	65
Landsat	1985-01-01	0	300	65
Landsat	1985-07-01	0	300	65
Landsat	1985-12-01	0	300	65
Landsat	1990-01-01	0	300	65
Landsat	1990-07-01	0	300	65
Landsat	1990-12-01	0	300	65
Landsat	1995-01-01	0	300	65
Landsat	1995-07-01	0	300	65
Landsat	1995-12-01	0	300	65
Landsat	2000-01-01	0	300	65
Landsat	2000-07-01	0	300	65
Landsat	2000-12-01	0	300	65
Landsat	2005-01-01	0	300	65
Landsat	2005-07-01	0	300	65
Landsat	2005-12-01	0	300	65

RESULTS AND CONCLUSIONS

- 1) Daytime cooling effects of the urbanized landscape (urban heat sink) are generally higher than the nighttime UHI. The highest nighttime gradient develops between Arid/semi-arid desert and paved urban surfaces followed by the Arid/semi-arid residential and Arid/semi-arid commercial/industrial gradients. These patterns are consistent at both seasons but the UHI is greater during the summer (Figs. 1, 2, 3).
- 2) Riparian woodland is consistently cooler than all natural and anthropogenic (except urban vegetation) land covers. Urban vegetation (park and cover dense vegetation) is the coolest among all land covers at both seasons (Fig. 3).
- 3) Arid/semi-arid desert experiences the highest day-night temperature amplitude at both seasons (Fig. 3).
- 4) Surface temperature is negatively correlated with NDVI at daytime but insignificantly correlated at night. This pattern is reversed for correlations between air temperature and relative humidity with surface temperature, which are more significant in October (Figs. 2). These findings will be further investigated by calculating energy balance and heat fluxes with the use of the Grimmond and Oke's Local-Urban Meteorological Parameterization Scheme (LUMPS) model.
- 5) Plume trajectories illustrate combined changes in surface microclimate parameters associated with land cover transitions. Control (no change) sites (Fig. 5a) show some variation in surface conditions remaining after normalization or stemming from management practices (i.e. Fig. 6b). Land cover change has various effects on vegetation cover and surface temperature (Fig. 5c, 6c) which depends on initial conditions and the nature of from-to transitions.

> Our analyses of diurnal and seasonal variations of surface temperature confirmed the existence of the nighttime surface UHI and the dominance of the daytime heat sink in Phoenix at both the summer and fall seasons. The highest temperature gradient is attributed to differences between paved surfaces and sparsely vegetated Arid/semi-arid desert community which has the fastest cooling rate in the absence of incoming solar radiation.

> Quantification of the effects of urbanization on microclimate conducted via studying intertemporal and temporal changes of key surface parameters (vegetative cover, surface temperature, and soil moisture) derived from satellite data has a potential for developing a predictive statistical model that can help in predicting surface microclimate given different scenarios of urban development.

ACKNOWLEDGEMENTS

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摘要具体格式请访问大会网站 <http://leml.asu.edu/ISOMES/7thisome/index.htm>, 海报展板格式请在网站首页“关于评选 2013 第七届“ISOMES 李博院士研究生论文奖”的通知”中下载。请于 2013 年 4 月 30 日前将论文摘要或海报（电子版；PPT, PDF, 或 Word）提交到大会秘书处(lizhen2011@scbg.ac.cn)。

会议注册

请您在 <http://leml.asu.edu/ISOMES/7thisome/index.htm> 网站上下载注册表，于 2013 年 5 月 15 日前发给会议秘书处，论文或论文摘要请于 2013 年 4 月 30 日前发于李真：
lizhen2011@scbg.ac.cn。

注册费

在职人员（包括博士后）注册费 1000 元，学生注册费 500 元（博士生、硕士生、本科生，需要提供有效学生证复印件，或学校/机构提供的学生证明）。

★注册费包括会议资料及会议期间午餐和晚餐的费用。

★会务组不统一安排早餐。与会人员可自行选择酒店早餐。

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会务组联系方式

联络人：

李 真：电话：020-37252921, 15820299399；电子邮件：lizhen2011@scbg.ac.cn

周丽霞：电话：020-37252977, 13710253656；电子邮件：zhoulx@scbg.ac.cn

林永标：电话：020-37252915, 13570017202；电子邮件：liny@scbg.ac.cn

交通信息

广州白云国际机场—燕岭大厦

- (1) 乘坐地铁三号线[机场南→体育西] (坐 9 站)到燕塘站下(B 出入口) 步行 40 米到燕岭大厦(全程需时约 40 分钟)。地铁营运时间：6：10-23：00。
- (2) 乘机场快线 8 号线 A[机场→天河客运站]，到天河客运站下车，然后乘坐任何一路公交车到“燕塘企业站”下，前走约 50 米即到燕岭大厦。全程 20 元，每隔 25 分钟一班。运营时间：7:10-23:00。
- (3) 乘坐的士：约 110 元。

广州火车站—燕岭大厦

- (1) 乘坐地铁二号线（坐 8 站）到地铁嘉禾望岗站转乘地铁三号线(机场



南-体育西) (坐 6 站) 到地铁燕塘站 (B 出入口) 下。走约 40 米到燕岭大厦。运营时间: 6: 18-23 :00。

- (2) 乘 257 路公交车, 在“燕塘企业站”下, 过人行天桥即到燕岭大厦。
- (3) 乘坐的士: 约 35 元。

广州火车站—燕岭大厦

- (1) 地铁广州东站 G1 出入口乘坐地铁三号线(体育西-机场南) (坐 1 站) 到地铁燕塘站 B 出入口下。走约 40 米到燕岭大厦。
- (2) 乘 884 路公交车, 在“燕塘企业站”下, 过人行天桥即到燕岭大厦。
- (3) 乘坐的士: 约 15 元。



酒店信息

酒店	房型	价格	早餐	宽带	电话	备注
燕岭大厦	标准房	310	无早	免费	020-37232288	早餐40元/位 (自助餐)
	豪华房	350	无早	免费		
	行政房	480	无早	免费		
	商务套房	900	无早	免费		
	行政套房	1200	无早	免费		
	贵宾套房	3800	无早	免费		
汉庭快捷酒店	高级大床房	219	无早	免费	020-87089999	会员含早餐、非会员早餐18元/位
	家庭房	239	无早	免费		
七天连锁酒店	大床房	245	无早	免费	020-37030188	早餐7元/位
	双床房	275	无早	免费		
	商务房大床房	261	有早	免费		
	商务房双床房	305	有早	免费		
新金山商务酒店	标准双床房	178	无早	免费	020-87733018	酒店不设早餐
	商务房	238	无早	免费		
	豪华房	258	无早	免费		
	商务套房	338	无早	免费		
国茂大酒店	标准客房	248	无早	免费	020-87205888	酒店不设早餐
	豪华客房	288	无早	免费		