

中国生物多样性监测网络建设: 从CForBio到Sino BON

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Biodiversity monitoring in China: from CForBio to Sino BON

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生物多样性监测网络的建设在近年来得到了快速发展, 特别是在联合国《生物多样性公约》爱知目标(2011–2020生物多样性战略规划, www.cbd.int/sp/)的推动下(马克平, 2011a), 从全球到区域和国家尺度, 都在加强生物多样性监测工作, 以期对生物多样性保护及其进展评估提供翔实可靠的数据(马克平, 2011b)。全球尺度上有代表性的项目有 GEO BON(www.earthobservations.org/geobon.shtml), 它虽然没有自己建设的实体监测网络, 但在监测的理论框架、核心监测指标(essential biodiversity variables, EBV)和建立实体监测网络之间的联系等方面的工作卓有成效; 在区域尺度上, 欧洲(<http://bd.eionet.europa.eu/activities>)和亚太地区(www.esabii.biodic.go.jp/ap-bon/index.html)都有相关的项目在组织推动; 国家水平上, 瑞士(www.biodiversitymonitoring.ch/en/home.html)和英国(jncc.defra.gov.uk/page-0)的生物多样性监测比较有代表性, 特别是瑞士的国家生物多样性监测网络的设计和运行都值得认真研究和效仿。除上述综合性的监测网络外, 还有一些全球、区域或者国家水平的专题性监测网络也是颇有成效的, 如全球森林生物多样性监测网络(CTFS/ForestGEO, <http://www.ctfs.si.edu/>)、热带生态评估与监测网络(Team, www.teamnetwork.org/)、全球珊瑚礁监测网络(GCRMN, www.icriforum.org/gcrmn)、欧洲蚜虫监测网络(EXAMINE, <http://www.rothamsted.ac.uk/examine/>)和英国蝴蝶监测网络(www.ukbms.org/)等。相比较而言, 中国生物多样性监测网络的建设亟需加强。

中国科学院生物多样性委员会于2004年开始组织有关研究所的科研人员和院外相关单位的合

作者共同建设中国森林生物多样性监测网络(CForBio, www.cfbiodiv.org/)。截至2014年底, 该网络已经建成大型森林固定样地13个, 每个主样地都有若干辅助样地, 总样地面积340 ha, 标记木本植物(DBH \geq 1 cm)1,600种150余万株。通过建立大型固定样地, 对中国主要地带性森林类型的生物多样性变化进行了连续监测, 同时促进了相关的研究。基于CForBio的样地数据, 已经发表学术论文250篇(附录1), 其中在SCI刊物发表论文119篇, 包括生态学顶级刊物Ecology Letters, Ecology等, 发表论文的数量和质量都呈快速增长态势(附图1), CForBio成为近年来支撑中国生态学发展的重要平台, 并带动了林业、环保和教育部门的大样地建设, 也是全球森林生物多样性监测网络中最活跃的区域网络, 在国内外同行中产生了积极的影响(马克平, 2014; Anderson-Teixeira *et al.*, 2014)。

在CForBio取得良好发展的基础上, 中国科学院在“十二五”计划期间安排专门经费开始建设中国生物多样性监测与研究网络(Sino BON)。“十三五”又加大投入力度, 加强该网络的仪器设备购置, 以提高生物多样性监测与研究能力。目标是通过多种方法从整体上对中国生物多样性的变化开展长期的监测与研究。Sino BON将包括10个专项网和1个综合监测管理中心(附图2)。综合监测管理中心在网络办公室领导下主要负责三个方面的工作: (1)组织制订和监督施行监测规划、标准规范和管理制度等; (2)信息管理平台建设, 包括数据标准制订、汇交、分布式信息管理系统的建设和运行等; (3)生态系统或生境的遥感监测, 以及监测样区遥感信息的采集、分析和共享, 特别是通过激光雷达(LiDAR)技术开展样区的近地面遥感监测, 为各个监测专项网提

供生境和生态系统可视化信息。10个监测专项网包括: (1)兽类多样性监测专项网, 主要是通过红外触发相机途径对兽类及其群落的时间和空间动态进行监测; (2)鸟类多样性监测专项网, 主要通过红外触发相机、自动录音机、卫星跟踪等方法对地面活动鸟类、鸣禽和迁徙鸟类进行监测; (3)两栖爬行类多样性监测专项网, 主要通过布设在全国60余个监测点的样方和样带来监测两栖爬行动物及其群落的时空变化; (4)鱼类多样性监测专项网, 运用水下机器人和鱼探仪等先进设备对重要水域的指示性鱼类开展长期监测, 了解其种类、数量和资源的变化; (5)昆虫多样性监测专项网, 选择重要昆虫类群, 如蝴蝶、传粉昆虫、地表甲虫、蚜虫等, 对其种类和数量进行长期监测, 分析和评价昆虫多样性变化及其关键影响因素; (6)土壤动物多样性监测专项网, 选择我国典型区域的地带性植被类型, 分别以大型、中型和小型土壤动物的代表性类群为对象, 就物种多样性、食性与功能群及土壤动物生存环境变化等开展长期监测; (7)森林植物多样性监测专项网, 在已经建立的森林生物多样性监测网络基础上, 在重要森林和灌丛群落的典型地段建立模式植物群落, 并将其与大型森林样地建立联系, 组成区域到全国的森林监测网络, 同时加强大样地网络的功能性状等监测, 并与动物和微生物多样性监测专项网合作, 推动森林生物多样性变化的全面监测; (8)草原荒漠多样性监测专项网, 以植被分类系统的群系(formation)为基本单元, 在草原荒漠植被主要群系的典型地段建立模式植物群落监测固定样方, 定期复查, 统一描述规范, 长期监测草原荒漠植物多样性变化; (9)林冠生物多样性监测专项网, 以森林塔吊为主要平台, 开展地带性森林林冠生物多样性的调查与监测, 重点类群包括孢子植物、无脊椎动物和树栖微生物; (10)土壤微生物多样性监测专

项网, 采用现代高通量测序技术、生物信息学技术和传统的微生物学方法, 对森林、草原和荒漠等不同植被类型的土壤微生物的群落组成、多样性及土壤基因组的组成与多样性等开展长期定点监测, 以揭示土壤微生物物种和基因多样性的分布规律和时空格局变化。我国的海洋生物多样性非常丰富, 应该创造条件尽快建立海洋生物多样性监测专项网。

除中国科学院正在建设的中国生物多样性监测与研究网络外, 环保部、国家林业局和高等院校等还建立了关于森林资源、湿地生态系统和野生动植物多样性的监测网络, 如国家林业局的森林资源清查体系已有40余年历史, 发展到由41.5万个面积为一亩的固定样地组成的网络; 以红外触发相机为主的兽类监测网络也取得了快速发展, 尤以对东北虎(*Panthera tigris altaica*)和远东豹(*Panthera pardus orientalis*)等野生动物监测的成效显著。在第一届全国生物多样性监测研讨会(<http://www.cncdiversitas.org/>)上, 来自环保部、教育部、国家林业局和中国科学院等部门的代表比较全面地报告了我国生物多样性监测进展。希望国家主管部门牵头, 联合中国科学院等单位共同建设中国生物多样性监测体系, 整合已经建立的监测网络和设施, 实现资源和信息共享, 为我国生物多样性保护与持续利用提供科技支撑。下一步的重点工作应该包括: (1)完善监测网络(包括专项网)的设计、管理模式和相关标准规范和管理制度的建立; (2)核心监测指标(EBV)的确定; (3)现状和变化的评估指标体系的建立; (4)保障措施的落实, 包括监测队伍、组织管理和基本运行经费等。

文内参考文献见 <http://www.biodiversity-science.net/fileup/PDF/w2015-025-4.pdf>

致谢: 感谢中国科学院生物多样性委员会办公室徐学红帮助整理附录1-3。

附录 Supplementary Materials

附录1 中国森林生物多样性监测网络(CForBio)发表论文目录(截至2014年底)

Appendix 1 The publication list of Chinese Forest Biodiversity Monitoring Network (CForBio) (2006–2014)
<http://www.biodiversity-science.net/fileup/PDF/w2015-025-1.pdf>

附图1 中国森林生物多样性监测网络(CForBio)发表论文的年度变化

Fig. S1 Trends of the number of publications from CForBio
<http://www.biodiversity-science.net/fileup/PDF/w2015-025-2.pdf>

附图2 中国生物多样性监测网络(Sino BON)组成结构

Fig. S2 Organizational structure of Sino BON
<http://www.biodiversity-science.net/fileup/PDF/w2015-025-3.pdf>

The Publication List of Chinese Forest Biodiversity Monitoring Network (2006-2014)

2014

1. Bai Xuejiao, Brenes-Arguedas Tania, Ye Ji, Wang Xugao, Lin Fei, Yuan Zuoqiang, Shi Shuai, Xing Dingliang and Hao Zhanqing. 2014. Dynamics of two understory shrub species in old growth and young secondary forests. *PLoS ONE*, 9(6): e98200.
2. Feng Gang, Svenning Jens-Christian, Mi Xiangcheng, Qi Jia, Rao Mide, Ren Haibao, Bebbler P. Daniel and Ma Keping, 2014. Anthropogenic disturbance shapes phylogenetic and functional tree community structure in a subtropical forest. *Forest Ecology and Management*, 313: 188-198.
3. Feng Gang, Mi Xiangcheng, Bøcher PK, Mao Lingfeng, Sandel Brody, Cao Min, Ye Wanhui, Hao Zhanqing, Gong Hede, Zhang Yutao, Zhao Xiuhai, Jin Guangze, Ma Keping and Svenning Jens-Christian. 2014. Relative roles of local disturbance, current climate and palaeoclimate in determining phylogenetic and functional diversity in Chinese forests. *Biogeosciences*, 11:1361-1370.
4. Hu Yuehua, Kitching L. Roger, Lan Guoyu, Zhang Jiaolin, Sha Liqing and Cao Min. 2014. Size-class effect contributes to tree species assembly through influencing dispersal in tropical forests. *PLoS ONE*, 9:e108450.
5. Huang Jianxiong, Zhang Jian, Shen Yong, Lian Juyu, Cao Honglin, Ye Wanhui, Wu Linfang and Bin Yue. 2014. Different relationships between temporal phylogenetic turnover and phylogenetic similarity and in two forests were detected by a new null model. *PLoS ONE*, 9(4): e95703.
6. Kang Meng, Chang X. Scott, Yan Enrong and Wang Xihua. 2014. Trait variability differs between leaf and wood tissues across ecological scales in subtropical forests. *Journal of Vegetation Science*, 25:703-714.
7. Lin Fei, Comita Liza, Wang Xugao, Bai Xuejiao, Yuan Zuoqiang, Xing Dingliang and Hao Zhanqing. 2014. The contribution of understory light availability and biotic neighborhood to seedling survival in secondary versus old-growth temperate forest. *Plant Ecology*, 215:795-8072.
8. Liu Jiajia, Tan Yunhong and Slik J.W. Ferry. 2014. Topography related habitat associations of tree species traits, composition and diversity in a Chinese tropical forest. *Forest Ecology and Management*, 330:75-81.
9. Liu Yanyan, Li Fengri and Jin Guangze. 2014. Spatial patterns and associations of four species in an old-growth temperate forest. *Journal of Plant Interactions*, 9: 745-753.

10. Ma Lei, Chen Can, Shen Yong, Wu Linfang, Huang Zhongliang and Cao Honglin. 2014. Determinants of tree survival at local-scale in a subtropical forest. *Ecological Research*, 29(1):69-80.
11. Qi Yujiao, Li Fengri, Liu Zhili and Jin Guangze. 2014. Impact of understorey on overstorey leaf area index estimation from optical remote sensing in five forest types in northeastern China. *Agricultural and Forest Meteorology*, 198-199:72-80.
12. Qian Hong, Hao Zhanqing and Zhang Jian. 2014. Phylogenetic structure and phylogenetic diversity of angiosperm assemblages in forests along an elevational gradient in Changbaishan, China. *Journal of Plant Ecology*, 7(2):154-165.
13. Shen Yong, Santiago S. Louis, Shen Hao, Ma Lei, Lian Juyu, Cao Honglin, Lu Huanping and Ye Wanhui. 2014. Determinants of change in subtropical tree diameter growth with ontogenetic stage. *Oecologia*, 175:1315-1324.
14. Shi Lingling, Mortimer E. Peter, Slik J. W. Ferry, Zou Xiaoming, Xu Jianchu, Feng Wenting and Qiao Lu. 2014. Variation in forest soil fungal diversity along a latitudinal gradient. *Fungal Diversity*, 64(1):305-315.
15. Wang Fang, Wang Zhengfeng, Ye Wanhui, Yu Liang and Ma Keping. 2014. Isolation and characterization of microsatellite loci in an endemic species *Styrax odoratissimus* (Styracaceae) in subtropical forests. *Conservation Genetics Resources*, 6(3):579-580.
16. Wang Qinggang, Bao Dachuan, Guo Yili, Lu Junmeng, Lu Zhijun, Xu Yaozhan, Zhang Kuihan, Liu Haibo, Meng Hongjie, Jiang Mingxi, Qiao Xiujuan and Huang Handong. 2014. Species associations in a species-rich subtropical forest were not well-explained by stochastic geometry of biodiversity. *PLoS ONE*, 9(5):e97300.
17. Wang Qinggang, Xu Yaozhan, Lu Zhijun, Bao Dachuan, Guo Yili, Lu Junmeng, Zhang Kuihan, Liu Haibo, Meng Hongjie, Qiao Xiujuan, Huang Handong, Jiang Mingxi. 2014. Disentangling the effects of topography and space on the distributions of dominant species in a subtropical forest. *Chinese Science Bulletin*, 59:5113-5122.
18. Wang Zhengfeng, Lian Juyu, Ye Wanhui, Cao Honglin and Wang Zhangming. 2014. The spatial genetic pattern of *Castanopsis chinensis* in a large forest plot with complex topography. *Forest Ecology and Management*, 318:318-325.
19. Wei Shiguang, Li Lin, Chen Zhencheng, Lian Juyu, Lin Guojun, Huang Zhongliang, Yin Zuoyun. 2014. Which models are appropriate for six subtropical forests: species-area and species-abundance models. *PLoS ONE*, 9(4): e95890.
20. Xing Dingliang, Swenson G. Nathan, Weiser D. Michael and Hao Zhanqing. Determinants of species abundance for eastern north american trees. *Global Ecology and Biogeography*, 23:903-911.
21. Yang Jie, Ci Xiuqin, Lu Mengmeng, Zhang Guocheng, Cao Min, Li Jie and Lin Luxiang. 2014. Functional traits of tree species with phylogenetic signal co-vary

- with environmental niches in two large forest dynamics plots. *Journal of Plant Ecology*, 7(2):115-125.
22. Yang Xiaodong, Yan Enrong, Chang X. Scott, Wang Xihua, Zhao Yantao and Shi Qingru. 2014. Twig-leaf size relationships vary with soil moisture gradient in subtropical forests. *Acta Oecologica*, 60:17-25.
23. Ye Ji, Hao Zhanqing, Wang Xugao, Bai Xuejiao, Xing Dingliang and Yuan Zuoqiang. 2014. Local-scale drivers of multi-stemmed tree formation in *Acer*, in a temperate forest of Northeast China. *Chinese Science Bulletin*, 59(3):320-325.
24. Yu Xiaodong, Luo Tianhong and Zhou Hongzhang. 2014. Composition and distribution of ground-dwelling beetles among oak fragments and surrounding pine plantations in a temperate forest of North China. *Insect Science*, 21:114-124.
25. Anderson-Teixeira Kristina J., Davies J. Stuart, Bennett C. Amy, Gonzalez-Akre B. Erika, Muller-Landau C. Helene, Wright S. Joseph, Salim Kamariah Abu, Zambrano Angélica M. Almeyda, Alonso Alfonso, Baltzer L. Jennifer, Basset Yves, Bourg A. Norman, Broadbent N. Eben, Brockelman Y. Warren, Bunyavejchewin Sarayudh, Burslem F. R. P. David, Butt Nathalie, Cao Min, Cardenas Dairon, Chuyong B. George, Clay Keith, Cordell Susan, Dattaraja S. Handanakere, Deng Xiaobao, Detto Matteo, Du Xiaojun, Duque Alvaro, Erikson L. David, Ewango E.N. Corneille, Fischer A. Gunter, Fletcher Christine, Foster B. Robin, Giardina P. Christian, Gilbert S. Gregory, Gunatilleke Nimal, Gunatilleke Savitri, Hao Zhanqing, Hargrove W. William, Hart B. Terese, Hau C.H. Billy, He Fangliang, Hoffman M. Forrest, Howe W. Robert, Hubbell P. Stephen, Inman-Narahari M. Faith, Jansen A. Patrick, Jiang Mingxi, Johnson J. Daniel, Kanzaki Mamoru, Kassim Abdul Rahman, Kenfack David, Kibet Staline, Kinnaird F. Margaret, Korte Lisa, Kral Kamil, Kumar Jitendra, Larson J. Andrew, Li Yide, Li Xiankun, Liu Shirong, Lum K.Y. Shawn, Lutz A. James, Ma Keping, Maddalena M. Damian, Makana Jean-Remy, Malhi Yadvinder, Marthews Toby, Serudin Rafizah Mat, McMahon M. Sean, McShea J. William, Memiaghe R. Hervé, Mi Xiangcheng, Mizuno Takashi, Morecroft Michael, Myers A. Jonathan, Novotny Vojtech, Oliveira A. de Alexandre, Ong S. Perry, Orwig A. David, Ostertag Rebecca, Ouden den Jan, Parker G. Geoffrey, Phillips P. Richard, Sack Lawren, Sainge N. Moses, Sang Weiguo, Sri-ngernyuang Kriangsak, Sukumar Raman, Sun I-Fang, Sungpalee Witchaphart, Suresh Hebbalalu Sathyanarayana, Tan Sylvester, Thomas C. Sean, Thomas W. Duncan, Thompson Jill, Turner L. Benjamin, Uriarte Maria, Valencia Renato, Vallejo I. Marta, Vicentini Alberto, Vrška Tomáš, Wang Xihua, Wang Xugao, Weiblen George, Wolf Amy, Han Xu, Yap Sandra and Zimmerman Jess. 2014. CTFS-ForestGEO: a worldwide network monitoring forests in an era of global change. *Global Change Biology*, 21:528-549.

26. Bruelheide Helge, Nadrowski Karin, Assmann Thorsten, Bauhus Jürgen, Both Sabine, Buscot François, Chen Xiaoyong, Ding Bingyang, Durka Walter, Erfmeier Alexandra, Gutknecht L. M. Jessica, Dali Guo, Guo Liangdong, Härdtle Werner, He Jinsheng, Klein Alexandra-Maria, Kühn Peter, Liang Yu, Liu Xiaojuan, Michalski Stefan, Niklaus A. Pascal, Pei Kequan, Scherer-Lorenzen Michael, Scholten Thomas, Schuldt Andreas, Seidler Gunnar, Trogisch Stefan, Oheimb von Goddert, Welk Erik, Wirth Christian, Wubet Tesfaye, Yang Xuefei, Yu Mingjian, Zhang Shouren, Zhou Hongzhang, Fischer Markus, Ma Keping and Schmid Bernhard. 2014. Designing forest biodiversity experiments: general considerations illustrated by a new large experiment in subtropical China. *Methods in Ecology and Evolution*, 5: 74-89.
27. Lasky R. Jesse, Yang Jie, Zhang Guocheng, Cao Min, Tang Yong and Keitt H. Timothy. 2014. The role of functional traits and individual variation in the co-occurrence of *Ficus* species. *Ecology*, 95(4):978-990.
28. Lang C. Anne, Oheimb von Goddert, Scherer-Lorenzen Michael, Yang Bo, Trogisch Stefan, Bruelheide Helge, Ma Keping and Härdtle Werner. 2014. Mixed afforestation of young subtropical trees promotes nitrogen acquisition and retention. *Journal of Applied Ecology*, 51:224-33.
29. Warren-Thomas Eleanor, Zhou Yi, Dong Lijia, Yao Xuenan, YangMengjie, Zhang Xiaoliang, Qin Ya, Liu Yunhui, Sang Weiguo, Axmacher Jan Christoph. 2014. Ground beetle diversity in Beijing's new mountain forests. *Forest Ecology and Management*, 334:369-376.
30. Cai Huiying, Di Xueying and Jin Guangze. 2014. Carbon density and production in valley spruce-fir forest in Xiaoxing'an mountains, China. *Chinese Journal of Applied Ecology*, 25(10):2794-2802. (In Chinese with English Abstract)
31. Chen Yun, Yuan Zhiliang, Ren Siyuan, Wei BoLiang, Jia Hongru and Ye Yongzhong. 2014. Correlation analysis of soil and species of different life forms in Baotianman Nature Reserve. *Chinese Science Bulletin*, 59(24):2367-2376. (In Chinese with English Abstract)
32. Fang Shuai, Yuan Zuoqiang, Lin Fei, Ye Ji, Hao Zhanqing and Wang Xugao. 2014. Functional and phylogenetic structures of woody plants in broad-leaved korean pine mixed forest in Changbai mountains, Jilin, China. *Chinese Science Bulletin*, 59(24): 2342-2348. (In Chinese with English Abstract)
33. Huang Fuzhao, Wang Bin, Ding Tao, Xiang Wusheng, Li Xiankun and Zhou Aiping. 2014. Numerical classification of associations in a northern tropical karst seasonal rain forest and the relationships of these associations with environmental factors. *Biodiversity Science*, 22(2):157-166. (In Chinese with English Abstract)
34. Kuang Xu, Xing Dingliang, Zhang Zhaochen, Song Houjuan, Wang Yunyun, Fang Shuai, Yuan Zuoqiang, Ye Ji, Lin Fei, Wang Xugao and Hao Zhanqing. 2014.

- Species composition and community structure of a spruce-fir forest and a larch forest on the northern slope of Changbai mountains, northeast China. *Chinese Journal of Applied Ecology*, 25(8):2149-2157. (In Chinese with English Abstract)
35. Liu Chun, Liu Yankun and Jin Guangze. 2014. Seasonal dynamics of soil microbial biomass in six forest types in Xiaoxing'an mountains, China. *Acta Ecologica Sinica*, 34(2):451-459. (In Chinese with English Abstract)
36. Liu Haifeng, Xue Dayuan and Sang Weiguo. 2014. Species diffusion and niche differentiation of the warm temperate deciduous broad-leaved forest in its functional development process. *Chinese Science Bulletin*, 59(24):2359-2366. (In Chinese with English Abstract)
37. Liu Jiancai, Chen Jinling and Jin Guangze. 2014. Response of soil organic carbon and nutrients to simulated nitrogen deposition in typical mixed broadleaved-korean pine forest. *Bulletin of Botanical Research*, 34(1):121-130. (In Chinese with English Abstract)
38. Liu Yanyan, Jin Guangze and Li Fengri. 2014. Influence of forest gaps on seedling establishment in a mixed broadleaved-korean pine (*Pinus koraiensis*) forest in Xiao Hinggan mountains. *Chinese Science Bulletin*, 59(24): 2396-2406. (In Chinese with English Abstract)
39. Liu Zhili and Jin Guangze. 2014. Estimation of seasonal changes in leaf area index based on optical methods in spruce-fir valley forest. *Chinese Journal of Applied Ecology*, 25(12):3420-3428. (In Chinese with English Abstract)
40. Liu Zhili, Jin Guangze and Zhou Ming. 2014. Measuring seasonal dynamics of leaf area index in a mixed conifer-broadleaved forest with direct and indirect methods. *Chinese Journal of Plant Ecology*, 38(8):843-856. (In Chinese with English Abstract)
41. Niu Xiaomin, Shi Shuai, Wang ZhengFeng, Ye Wanhui and Hao Zhanqing. 2014. Spatial autocorrelation of genetic structure of *Prunus padus* population in broadleaved korean pine forest of Changbai mountains. *Chinese Journal of Applied Ecology*, 25(5):305-310. (In Chinese with English Abstract)
42. Ren Siyuan, Wang Ting, Zhu Yan, Ye Yongzhong, Yuan Zhiliang, Li Cong, Pan Na and Li Luxin. 2014. Phylogenetic structure of individuals with different DBH sizes in a deciduous broad-leaved forest community in the temperate-subtropical ecological transition zone, China. *Biodiversity Science*, 22(5):574-582. (In Chinese with English Abstract)
43. Song Houjuan, Ye Ji, Lin Fei, Yuan Zuoqiang, Hao Zhanqing and Wang Xugao. 2014. Effects of sampling scales on spatial patterns of woody species in forests. *Chinese Science Bulletin*, 59(24):2388-2395. (In Chinese with English Abstract)
44. Song Houjuan, Ye Ji, Shi Shuai, Zhang Zhaochen, Kuang Xu, Xing Dingliang, Yuan Zuoqiang, Lin Fei, Wang Xugao and Hao Zhanqing. 2014. Woody plant

- species composition and community structure in residual fragments of broad-leaved korean pine mixed forests in Changbai mountains area. **Chinese Journal of Applied Ecology**, 25(5):1239-1249. (In Chinese with English Abstract)
45. Song Wenyi, Cai Huiying, Jin Guangze, Li Fengri, Jia Weiwei and Cui Xiaoyang. 2014. Carbon density and its distribution of *Pinus koraiensis* plantations in different regions of Heilongjiang province. **Bulletin of Botanical Research**, 34(5):619-625. (In Chinese with English Abstract)
46. Tong Jian, Jin Guangze, Li Fengri, Jia Weiwei and Cui Xiaoyang. 2014. Carbon density and distribution in soft broad-leaved mixed forest of different age classes in Heilongjiang province, northeast China. **Chinese Journal of Ecology**, 33(12):3191-3202. (In Chinese with English Abstract)
47. Wang Baoqi, Liu Zhili, Qi Yujiao and Jin Guangze. 2014. Seasonal dynamics of leaf area index using different methods in the korean pine plantation. **Acta Ecologica Sinica**, 34(8):1956-1964. (In Chinese with English Abstract)
48. Wang Bin, Huang Yusong, Li Xiankun, Xiang Wusheng, Ding Tao, Huang Fuzhao, Lu Shuhua, Han Wenheng, Wen Shujun and He Lanjun. 2014. Species composition and spatial distribution of a 15 ha northern tropical karst seasonal rain forest dynamics study plot in Nonggang, Guangxi, southern China. **Biodiversity Science**, 22(2):141-156. (In Chinese with English Abstract)
49. Wang Ting, Ren Siyuan, Chen Yun, Yuan Zhiliang, Li Luxin, Pan Na and Ye Yongzhong. 2014. Carbon storage dynamics of *Pinus armandii* forest at different diameter levels based on tree ring data in the Baotianman National Nature Reserve, central China. **Chinese Science Bulletin**, 59(35):3499-3507. (In Chinese with English Abstract)
50. Wang Ting, Ren Siyuan, Yuan Zhiliang, Zhu Yan, Pan Na, Li Luxin and Ye Yongzhong. 2014. Effects of density dependence on the spatial patterns of *Quercus aliena* var. *acuteserrata* trees in deciduous broad-leaved forest in the Baotianman Nature Reserve, central China. **Biodiversity Science**, 22(4):449-457. (In Chinese with English Abstract)
51. Wang Wei, Rao Mide, Chen Shengwen, Zhu Dahai, Mi Xiangcheng and Zhang Jintun. 2014. Effects of negative density dependence and habitat filtering on temporal variation in phylogenetic community structure of seedlings in a mid-subtropical forest. **Chinese Science Bulletin**, 59(19):1844-1850. (In Chinese with English Abstract)
52. Wang Yunyun, Shi Shuai, Lin Fei, Yuan Zuoqiang, Ye Ji, Wang Xugao and Hao Zhanqing. 2014. Reproductive traits and their correlation among woody plants in a broadleaf-korean pine (*Pinus koraiensis*) mixed forest in northeast China. **Chinese Science Bulletin**, 59(24):2407-2415. (In Chinese with English Abstract)

53. Xiao Zhishu, Du Xiaojun, Wang Xuezhi, Huang Xiaoqun and Yan Manyu. 2014. Preliminary records of mammals and birds by camera traps in Baotianman forest dynamics plot, central China. *Biodiversity Science*, 22(6):813-815. (In Chinese with English Abstract)
54. Xie Wenhua, Yang Xifu, Li Junnian, Tao Shuanglun and Xiao Zhishu. 2014. A preliminary study of the biodiversity of ground-dwelling small mammals in Badagongshan National Nature Reserve, Hunan province. *Biodiversity Science*, 22(2):216-222. (In Chinese with English Abstract)
55. Zhang Ben and Jin Guangze. 2014. Effects of selective cutting on the spatial and temporal distribution of fine biomass in mixed broadleaved Korean pine forest. *Forest Research*, 27(2):240-245. (In Chinese with English Abstract)
56. Zhang Mi, Mi Xiangcheng and Jin Guangze. 2014. Composition and spatial patterns of the Liangshui spruce-fir valley forest in the Xiao Hinggan mountains. *Chinese Science Bulletin*, 59(24):2377-2387. (In Chinese with English Abstract)
57. Zhou Yilin, Qiu Xia, Fang Xiaobin, Yang Luyi, Zhao Yi, Fang Teng, Zheng Weihong and Liu Jinsong. 2014. Acoustic characteristics of eight common Chinese anurans during the breeding season. *Zoological Research*, 35(1): 42-50. (In Chinese with English Abstract)

2013

58. Chen Guoke, Kéry Marc, Plattner Matthias, Ma Keping and Gardner Beth. 2013. Imperfect detection is the rule rather than the exception in plant distribution studies. *Journal of Ecology*, 101:183-191.
59. Gao Cheng, Shi NanNan, Liu Yuexing, Peay G. Kabir, Zheng Yong, Qiong Ding, Mi Xiangcheng, Ma Keping, Wubet Tesfaye, Buscot François and Guo Liangdong. 2013. Host plant genus-level diversity is the best predictor of ectomycorrhizal fungal diversity in a Chinese subtropical forest. *Molecular Ecology*, 22: 3403-3414.
60. Guo Yili, Lu Junmeng, Franklin Scott, Wang Qinggang, Xu Yaozhan, Zhang Kuihan, Bao Dachuan, Qiao Xiujian, Huang Handong, Lu Zhijun and Jiang Mingxi. 2013. Spatial distribution of tree species in a species-rich subtropical mountain forest in central China. *Canadian Journal of Forest Research*, 43:826-835.
61. He Jian, Li Xiaoyi, Gao Dandan, Zhu Peng, Wang ZhengFeng, Wang Zhangming, Ye Wanhui and Cao Honglin. 2013. Topographic effects on fine-scale spatial genetic structure in *Castanopsis chinensis* Hance (Fagaceae). *Plant Species Biology*, 28:87- 93.
62. He Zhiyuan, Tang Yong, Deng Xiaobao and Cao Min. 2013. Buttress trees in a

- 20-hectare tropical dipterocarp rainforest in Xishuangbanna, SW China. *Journal of Plant Ecology*, 6 (2):187-192.
63. Lai Jiangshan, Coomes A. David, Du Xiaojun, Hsieh Changfu, Sun I-Fang, Chao Weichun, Mi Xiangcheng, Ren Haibao, Wang Xugao, Hao Zhanqing and Ma Keping. 2013. A general combined model to describe tree-diameter distributions within subtropical and temperate forest communities. *Oikos*, 122:1636-1642.
64. Lai Jiangshan, Yang Bo, Lin Dunmei, Kerkhoff J. Andrew and Ma Keping. 2013. The allometry of coarse root biomass: log-transformed linear regression or nonlinear regression? *PLoS ONE*, 8(10): e77007.
65. Lin Dunmei, Lai Jiangshan, Mi Xiangcheng, Ren Haibao and Ma Keping. 2013. Spatial variation in community structure of a subtropical evergreen broad-leaved forest: implications for sampling design. *Chinese Science Bulletin*, 58:1181-1186.
66. Lin Guojun, Stralberg Diana, Gong Guiquan, Huang Zhongliang, Ye Wanhui and Wu Linfang. 2013. Separating the effects of environment and space on tree species distribution: from population to community. *PLoS ONE*, 8(2):e56171.
67. Liu Xiaojuan, Swenson Nathan, Zhang Jinlong and Ma Keping. 2013. The environment and space, not phylogeny, determine trait dispersion in a subtropical forest. *Functional Ecology*, 27: 264-272.
68. Mo Xiaoxue, Shi Lingling, Zhang Yongjiang, Zhu Hua and Slik J.W. Ferry. 2013. Change in phylogenetic community structure during succession of traditionally managed tropical rainforest in southwest China. *PLoS ONE*, 8(7):e71464.
69. Niu Hongyu, Ye Wanhui, Wang ZhengFeng, Chen Ying, Cao Honglin, Wu Linfang and Wang Zhangming. 2013. Development and characterization of 16 new polymorphic microsatellite loci for *Schima superba* (Theaceae). *Silvae Genetica*, 62:124-127.
70. Piao Tiefeng, Comita S. Liza, Jin Guangze and Kim Ji Hong. 2013. The importance of density dependence in regulating plant populations by acting cross multiple life-history stages. *Oecologia*, 172:207-217.
71. Qi Yujiao, Jin Guangze and Liu Zhili. 2013. Optical and litter collection methods for measuring leaf area index in an old-growth temperate forest in northeastern China. *Journal of Forest Research*, 18:430-439.
72. Ren Haibao, Condit Richard, Chen Bin, Mi Xiangcheng, Cao Min, Ye Wanhui, Hao Zhanqing and Ma Keping. 2013. Geographical range and local abundance of tree species in China. *PLoS ONE*, 8(10):e76374.
73. Shen Guochun, He Fangliang, Waagepetersen Rasmus, Sun I-Fang, Hao Zhanqing, Chen Zueng-Sang and Yu Mingjian. 2013. Quantifying effects of habitat heterogeneity and other clustering processes on spatial distributions of tree species. *Ecology*, 94(11):2436-2443.
74. Shen Guochun, Wiegand Thorsten, Mi Xiangcheng and He Fangliang. 2013.

- Quantifying spatial phylogenetic structures of fully stem-mapped plant communities. *Methods in Ecology and Evolution*, 4(2):1132-1141.
75. Shen Yong, Santiago S. Louis, Ma Lei, Lin Guojun, Lian Juyu, Cao Honglin and Ye Wanhui. 2013. Forest dynamics of a subtropical monsoon forest in Dinghushan, China: recruitment, mortality and the pace of community change. *Journal of Tropical Ecology*, 29:131-145.
76. Wang Xugao, Swenson G. Nathan, Wiegand Thorsten, Wolf Amy, Howe Robert, Lin Fei, Ye Ji, Yuan Zuoqiang, Shi Shuai, Bai Xuejiao, Xing Dingliang and Hao Zhanqing. 2013. Phylogenetic and functional diversity area relationships in two temperate forests. *Ecography*, 36:883-893.
77. Wei Shiguang, Li Lin, Huang Zhongliang, Ye Wanhui, Gong Guiquan, Zhou Xiaoyong and Lian Juyu. 2013. Multifractal analysis of diversity scaling laws in a subtropical forest. *Ecological Complexity*, 13:1-7.
78. Yan Enrong, Wang Xihua, Chang X. Scott and He Fangliang. 2013. Scaling relationships among twig size, leaf size and leafing intensity in a successional series of subtropical forests. *Tree Physiology*, 33: 609-617.
79. Yan Enrong, Yang Xiaodong, Chang X. Scott and Wang Xihua. 2013. Plant trait-species abundance relationships vary with environmental properties in subtropical forests in eastern China. *PLoS ONE*, 8(4):e61113.
80. Yang Jie, Swenson G. Nathan, Cao Min, Chuyong B. George, Ewango E. N. Corneille, Howe Robert, Kenfack David, Thomas Duncan, Wolf Amy and Lin Luxiang. 2013. A phylogenetic perspective on the individual species-area relationship in temperate and tropical tree communities. *PLoS ONE*, 8(7): e63192.
81. Yuan Zuoqiang, Gazol Antonio, Lin Fei, Ye Ji, Shi Shuai, Wang Xugao, Wang miao and Hao Zhanqing. 2013. Soil organic carbon in an old-growth temperate forest: spatial pattern, determinants and bias in its quantification. *Geoderma*, 195:48-55.
82. Zhang Jinlong, Swenson G. Nathan, Chen Bin, Liu Xiaojuan, Li Zongshan, Huang Jihong, Mi Xiangcheng and Ma Keping. 2013. Phylogenetic beta diversity in tropical forests: implications for the roles of geographical and environmental distance. *Journal of Systematics and Evolution*, 51(1):71-85.
83. Zhu Peng, Wang ZhengFeng, Ye Wanhui and Cao Honglin. 2013. Maintenance of genetic diversity in a small, isolated population of ancient tree *Erythrophleum fordii*. *Journal of Systematics and Evolution*, 51(6):722-730.
84. Zhu Yan, Getzin Stephan, Wiegand Thorsten, Ren Haibao and Ma Keping. 2013. The relative importance of Janzen-Connell effects in influencing the spatial patterns at the Gutianshan subtropical forest. *PLoS ONE*, 8(9):e74560.
85. Chisholm A. Ryan, Muller-Landau C. Helene, Rahman Kassim Abdul, Bebbler P. Daniel, Bin Yue, Bohlman A. Stephanie, Bourg A. Norman, Brinks Joshua,

- Bunyavejchewin Sarayudh, Butt Nathalie, Cao Honglin, Cao Min, Cardenas Dairon, Chang Liwan, Chiang Jyh-Min, Chuyong George, Condit Richard, Dattaraja S. Handanakere, Davies Stuart, Duque Alvaro, Fletcher Christine, Gunatilleke Nimal, Gunatilleke Savitri, Hao Zhanqing, Harrison D. Rhett, Howe Robert, Hsieh Chang-Fu, Hubbell P. Stephen, Itoh Akira, Kenfack David, Kiratiprayoon Somboon, Larson J. Andrew, Lian Juyu, Lin Dunmei, Liu Haifeng, Lutz A. James, Ma Keping, Malhi Yadvinder, McMahon Sean, McShea William, Meegaskumbura Madhava, Razman Mohd. Salim, Morecroft D. Michael, Nyctch J. Christopher, Oliveira Alexandre, Parker G. Geoffrey, Pulla Sandeep, Punchi-Manage Ruwan, Romero-Saltos Hugo, Sang Weiguo, Schurman Jon, Su Sheng-Hsin, Sukumar Raman, Sun I-Fang, Suresh S. Hebbalalu, Tan Sylvester, Thomas Duncan, Thomas Sean, Thompson Jill, Valencia Renato, Wolf Amy, Yap Sandra, Ye Wanhui, Yuan Zuoqiang and Zimmerman K. Jess. 2013. Scale-dependent relationships between tree species richness and ecosystem function in forests. *Journal of Ecology*, 101: 1214-1224.
86. Cao Ke, Rao Mide, Yu Jianzhong, Liu Xiaojuan, Mi Xiangcheng and Chen Jianhua. 2013. The phylogenetic signal of functional traits and their effects on community structure in an evergreen broad-leaved forest. *Biodiversity Sciences*, 21(5):564-571. (In Chinese with English abstract)
87. Chen Xiaorong, Chen Yuanyuan, Luo Zhengrong and Ding Bingyang. 2013. A 5-year mid-mountain subtropical evergreen broadleaved forest study in Baishanzu, east China. *Journal of Zhejiang A & F University*, 30(6):821-829. (In Chinese with English abstract)
88. Huang Yusong, Wu Wanghui, Jiang Rihong, Liu Shengyuan, Liu Yan and Li Xiankun. 2013. Primary study on species diversity of plant in Longgang National Nature Reserve of Guangxi. *Guihaia*, 33(3):346-355. (In Chinese with English abstract)
89. Li Ning, Xu Wubing, Lai Jiangshan, Yang Bo, Lin Dunmei and Ma Keping. 2013. The coarse root biomass of eight common tree species in subtropical evergreen forest. *Chinese Science Bulletin*, 58(4):329-335. (In Chinese with English abstract)
90. Lin Dunmei, Lai Jiangshan, Mi Xiangcheng, Ren Haibao and Ma Keping. 2013. Spatial variation in community structure of a subtropical evergreen broad-leaved forest: implications for sampling design. *Chinese Science Bulletin*, 58(1):69-74. (In Chinese, English vision: *Chinese Science Bulletin*, 2013, 58:1181-1186.)
91. Liu Haifeng, Sang Weiguo and Xue Dayuan. 2013. Topographical habitat variability of dominant species populations in a warm temperate forest. *Chinese Journal of Ecology*, 32(4):1-7. (In Chinese with English abstract)
92. Liu Qi, Cai Huiying and Jin Guangze. 2013. Effects of selective cutting on the

- carbon density and net primary productivity of a mixed broadleaved-korean pine forest in Northeast China. *Chinese Journal of Applied Ecology*, 24(10): 2709-2716. (In Chinese with English abstract)
93. Liu Zhili and Jin Guangze. 2013. Estimation of leaf area index of secondary *Betula platyphylla* forest in Xiaoxing'an mountains. *Acta Ecologica Sinica*, 33(8):2505-2513. (In Chinese with English abstract)
94. Liu Zhili, Qi Yujiao and Jin Guangze. 2013. Seasonality and spatial pattern of leaf area index of a spruce-fir forest at the valley in Xiaoxing'an mountains. *Scientia Silvae Sinicae*, 49(8):58-64. (In Chinese with English abstract)
95. Lu Pin, Jin Yi, Chen Jianhua, Li Minghong and Yu Mingjian. 2013. Influences of geographical distance and topographic difference on β diversity of two large-scale forest dynamics plots. *Biodiversity Science*, 21(3):1-10. (In Chinese with English abstract)
96. Lu Zhijun, Bao Dachuan, Guo Yili, Lu Junmeng, Wang Qinggang, He Dong, Zhang Kuihan, Xu Yaonian, Liu Haibo, Meng Hongjie, Huang Handong, Wei Xinzeng, Liao Jianxiong, Qiao Xiujian, Jiang Mingxi, Gu Zhirong and Liao ChunLin. 2013 Community composition and structure of Badagongshan (BDGS) forest dynamic plot in a mid-subtropical mountain evergreen and deciduous broad-leaved mixed forest, central China. *Plant Science Journal*, 31(4):336-344. (In Chinese with English abstract)
97. Ning Yajun, Chen Shiping, Qian Haiyuan, Ren Haibao, Dan Bebbber and Chen Jianhua. 2013. Diurnal and seasonal patterns of soil respiration in subtropical evergreen broad-leaved forests with different degrees of human disturbance in Gutianshan, Zhejiang province. *Chinese Science Bulletin*, 58(36):3839-3848. (In Chinese with English abstract)
98. Pan Xia, Zhou Rongfei, Gu Shasha, Xia Jiatian, Wang Dandan and Ding Bingyang. 2013. Structure and distribution pattern of *Cyclobalanopsis multinervis* population in an evergreen broad-leaved forest in Baishanzu. *Subtropical Plant Science*, 42(3):227-232. (In Chinese with English abstract)
99. Rao Mide, Feng Gang, Zhang Jinlong, Mi Xiangcheng and Chen Jianhua. 2013. Effects of environmental filtering and dispersal limitation on species and phylogenetic beta diversity in Gutianshan National Nature Reserve. *Chinese Science Bulletin*, 58(13):1204-1212. (In Chinese with English abstract)
100. Tian Kai, Chen Lei, Mi Xiangcheng, Ma Keping and Chen Jianhua. 2013. The effect of habitat filtering on tree seedling distribution in a subtropical evergreen broadleaf forest in China. *Chinese Science Bulletin*, 58(34): 3561-3569. (In Chinese with English abstract)
101. Xiang Wusheng, Nong Chonggang, Wang Bin, Liu Shengyuan, Ding Tao, He Lanjun, Li Xiankun and Huang Fuzhao. 2013. Growth models of *Excentrodendron*

- hsienmu* population in a karst seasonal rainforest. ***Guihaia***, 33(3):285-290. (In Chinese with English abstract)
102. Xiang Wusheng, Wang Bin, Ding Tao, Huang Yusong, Nong Chonggang, Liu Shengyuan and Li Xiankun. 2013. Age structure and quantitative dynamics of *Excentrodendron hsienmu* population in a karst seasonal rain forest in south China. ***Chinese Journal of Ecology***, 2(4):825-831. (In Chinese with English abstract)
103. Yan Hui, Wu Qian, Ding Jia and Zhang Shouren. 2013. Effects of precipitation and nitrogen addition on photosynthetically eco-physiological characteristics and biomass of four tree seedlings in Gutian mountain, Zhejiang province, China. ***Acta Ecologica Sinica***, 33(14):4226-4326. (In Chinese with English Abstract)
104. Yang Xiaodong, Yan Enrong, Zhang Zhihao, Sun Baowei, Huang Haixia, Ali Arshad, Ma Wenji and Shi Qingru. 2013. Tree architecture of overlapping species among successional stages in evergreen broad-leaved forests in Tiantong region, Zhejiang province, China. ***Chinese Journal of Plant Ecology***, 37(7):611-619. (In Chinese with English abstract)
105. Yuan Zhiliang, Chen Yun, Wei BoLiang, Zhang Binqiang, Wang Dongya, Ye Yongzhong. 2013. Species habitat correlation analysis in temperate subtropical ecological transition zone. ***Acta Ecologica Sinica***, 33(24):7819-7826. (In Chinese with English abstract)
106. Zhang Shusheng, Bao Yixin, Wang Yanni, Fang Pingfu and Bin Ye. 2013. Estimating rodent density using infrared-triggered camera technology. ***Acta Ecologica Sinica***, 33(10):2341-2348. (In Chinese with English abstract)
107. Zhang Zhaochen, Hao Zhanqing, Ye Ji, Lin Fei, Yuan Zuoqiang, Xing Dingliang, Shi Shuai and Wang Xugao. 2013. Short-term death dynamics of trees in natural secondary poplar-birch forest in Changbai mountains of northeast China. ***Chinese Journal of Applied Ecology***, 24(2):303-310. (In Chinese with English abstract)
108. Zhao Xue, Liu Yanyan and Jin Guangze. 2013. Effects of topography on seedling regeneration in a mixed broadleaved-korean pine forest in Xiaoxing'an mountains, northeast China. ***Chinese Journal of Applied Ecology***, 24(11):3035-3042. (In Chinese with English abstract)

2012

109. Bai Xuejiao, Queenborough A. Simon, Wang Xugao, Zhang Jian, Li Buhang, Yuan Zuoqiang, Xing Dingliang, Lin Fei, Ye Ji and Hao Zhanqing. 2012. Effects of local biotic neighbors and habitat heterogeneity on tree and shrub seedling survival in an old-growth temperate forest. ***Oecologia***, 170:755-765.
110. Bin Yue, Lin Guojun, Li Buhang, Wu Linfang, Shen Yong and Ye Wanhui. 2012. Seedling recruitment patterns in a 20 ha subtropical forest plot: hints for

- niche-based processes and negative density dependence. *European Journal of Forest Research*, 131(2):453-461.
111. Bin Yue, Ye Wanhui, Muller-Landau C. Helene, Wu Linfang, Lian Juyu and Cao Honglin. 2012. Unimodal tree size distributions possibly result from relatively strong conservatism in intermediate size classes. *PLoS ONE*, 7(12):e52596.
112. Cheng Jiajia, Mi Xiangcheng, Zhang Jintun and Ma Keping. 2012. Separating the effect of mechanisms shaping species-abundance distributions at multiple scales in a subtropical forest. *Oikos*, 121:236-244.
113. Du Yanjun, Mi Xiangcheng and Ma Keping. 2012. Comparison of seed rain and seed limitation between community understory and gaps in a subtropical evergreen forest. *Acta Oecologica*, 1-9.
114. Du Yanjun, Mi Xiangcheng, Liu Xiaojuan and Ma Keping. 2012. The effects of ice storm on seed rain and seed limitation in an evergreen broad-leaved forest in east China. *Acta Oecologica*, 39:87-93.
115. Feng Gang, Zhang Jinlong, Pei Nancai, Rao Mide, Mi Xiangcheng, Ren Haibao and Ma Keping. 2012. Comparison of phylobetadiversity indices based on community data from Gutianshan forest plot. *Chinese Science Bulletin*, 57(6):623-630.
116. Hu Yuehua, Lan Guoyu, Sha Liqing, Cao Min, Tang Yong, Li Yide and Xu Daping. 2012. Strong neutral spatial effects shape tree species distributions across life stages at multiple scales. *PLoS ONE*, 7(5):e38247.
117. Hu Yuehua, Sha Liqing, Blanchet F. Guillaume, Zhang Jiaolin, Tang Yong, Lan Guoyu and Cao Min. 2012. Dominant species and dispersal limitation regulate tree species distributions in a 20-ha plot in Xishuangbanna, southwest China. *Oikos*, 952-960.
118. Lan Guoyu, Getzin Stephan, Wiegand Thorsten, Hu Yuehua, Xie Guishui, Zhu Hua and Cao Min. 2012. Spatial distribution and interspecific associations of tree species in a tropical seasonal rain forest of China. *PLoS ONE*, 7(9):e46074.
119. Lan Guoyu, Zhu Hua and Cao Min. 2012. Tree species diversity of a 20-ha plot in a tropical seasonal rainforest in Xishuangbanna, southwest China. *Journal of Forest Research*, 17:432-439.
120. Li Buhang, Hao Zhanqing, Bin Yue, Zhang Jian and Wang miao. 2012. Seed rain dynamics reveals strong dispersal limitation, different reproductive strategies and response to climate in a temperate forest in northeast China. *Journal of Vegetation Science*, 23(2):271-279.
121. Lin Dunmei, Lai Jiangshan, Muller-Landau C. Helene, Mi Xiangcheng and Ma Keping. 2012. Topographic variation in aboveground biomass in a subtropical evergreen broad-leaved forest in China. *PLoS ONE*, 7(10):e48244.

122. Lin Luxiang, Comita S. Lisa, Zheng Zheng and Cao Min. 2012. Seasonal differentiation in density-dependent seedling survival in a tropical rainforest. *Journal of Ecology*, 100:905-914.
123. Liu Xiaojuan, Swenson G. Nathan, Wright S. Joseph, Zhang Liwen, Song Kai, Du Yanjun, Zhang Jinlong, Mi Xiangcheng, Ren Haibao and Ma Keping. 2012. Covariation in plant functional traits and soil fertility within two species-rich forests. *PLoS ONE*, 7(4):e34767.
124. Liu Zhili, Jin Guangze and Qi Yujiao. 2012. Estimate of leaf area index in an old-growth mixed broadleaved-korean pine forest in northeastern China. *PLoS ONE*, 7(3):e32155.
125. Luo Zhengrong, Mi Xiangcheng, Chen Xiaorong, Ye Zhenlin and Ding Bingyang. 2012. Density dependence is not very prevalent in a heterogeneous subtropical forest. *Oikos*, 121:1239-1250.
126. Luo Zhengrong, Yu Mingjian, Chen Deliang, Wu Yougui and Ding Bingyang. 2012. Spatial associations of tree species in a subtropical evergreen broad-leaved forest. *Journal of Plant Ecology*, 5(3):346-355.
127. Mi Xiangcheng, Swenson G. Nathan, Valencia Renato, Kress John, Erickson L. David, Pérez J. Álvaro, Ren Haibao, Sheng-Hsin Su, Gunatilleke Nimal, Gunatilleke Savi, Hao Zhanqing, Ye Wanhui, Cao Min, Suresh H. S., Dattaraja H. S., Sukumar R. and Ma Keping. 2012. The contribution of rare species to community phylogenetic diversity across a global network of forest plots. *American Naturalist*, 180(1):E17-E30.
128. Niu Hongyu, Li Xiaoyi, Ye Wanhui, Wang Zhengfeng, Cao Honglin and Wang Zhangmin. 2012. Isolation and characterization of 36 polymorphic microsatellite makers in *Schima superba* (Theaceae). *American Journal of Botany*, e123-e126.
129. Tang Yong, Kitching L. Roger and Cao Min. 2012. Lianas as structural parasites: a re-evaluation. *Chinese Science Bulletin*, 57(4): 307-312.
130. Wang Miao, Shi Shuai, Lin Fei, Hao Zhanqing, Jiang Ping and Dai Guanhua. 2012. Effects of soil water and nitrogen on growth and photosynthetic response of manchurian ash (*Fraxinus mandshurica*) seedlings in northeastern China. *PLoS ONE*, 7(2):e30754.
131. Wang Xugao, Comita S. Liza, Hao Zhanqing, Davies J. Stuart, Ye Ji, Lin Fei and Yuan Zuoqiang. 2012. Local-scale drivers of tree survival in a temperate forest. *PLoS ONE*, 7(2):e29469.
132. Wang Zhengfeng, Lian Juyu, Huang Guomin, Ye Wanhui, Cao Honglin and Wang Zhangmin. 2012. Genetic groups in the common plant species *Castanopsis chinensis* and their associations with topographic habitats. *Oikos*, 121:2044-2051.
133. Xing Pei, Zhang Qibin and Baker J. Patrick. 2012. Age and radial growth pattern of four tree species in a subtropical forest of China. *Trees*, 26:283-290.

134. Yuan Zuoqiang, Gazol Antonio, Wang Xugao, Xing Dingliang, Lin Fei, Bai Xuejiao, Zhao Yuqiang, Li Buhang and Hao Zhanqing. 2012. What happens below the canopy? Direct and indirect influences of the dominant species on forest vertical layers. *Oikos*, 121(7):1145-1153.
135. Cáceres De Miquel, Legendre Pierre, Valencia Renato, Cao Min, LiWan Chang, Chuyong George, Condit Richard, Hao Zhanqing, Hsieh ChangFu, Hubbell Stephen, Kenfack David, Ma Keping, Mi Xiangcheng, Noor Md. Nur Supardi, Kassim Abdul Rahman, Ren Haibao, Su Sheng-Hsin, Sun I-Fang, Thomas Duncan, Ye Wanhui and He Fangliang. 2012. The variation of tree beta diversity across a global network of forest plots. *Global Ecology and Biogeography*, 21:1191-1202.
136. Wiegand Thorsten, Huth Andreas, Getzin Stephan, Wang Xugao, Hao Zhanqing, Gunatilleke C. V. Savitri and Gunatilleke I. A. U. Nimal. 2012. Testing the independent species' arrangement assertion made by theories of stochastic geometry of biodiversity. *Proceedings of Royal Society B: Biological Sciences*, 27:3312-3320.
137. Du Yanjun and Ma Keping. 2012. Advancements and prospects in forest seed rain studies. *Biodiversity Science*, 20:94-107. (In Chinese with English Abstract)
138. Du Yanjun and Ma Keping. 2012. Temporal and spatial variation of seedfall in a broad-leaved evergreen forest in Gutianshan Nature Reserve of Zhejiang province, China. *Chinese Journal of Plant Ecology*, 36(8):717-728 (In Chinese with English Abstract)
139. Huang Yusong, Liu Shengyuan, Peng Richeng and Xu Weibin. 2012. A newly recorded species of *Phaius* (Orchidaceae) from China. *Guihaia*, 32(2):143-145. (In Chinese with English Abstract)
140. Liu Haifeng, Xue Dayuan and Sang Weiguo. 2012. Effect of topographic factors on the relationship between species richness and aboveground biomass in a warm temperate forest. *Ecology and Environmental Sciences*, 21(8):1403-1407. (In Chinese with English Abstract)
141. Liu Yanjun and Zheng Zheng. 2012. Abundance and distribution pattern of tree cavity in tropical forest in Xishuangbanna, southwest China. *Chinese Journal of Ecology*, 31:271-275. (In Chinese with English Abstract)
142. Liu Zhili and Jin Guangze. 2012. Estimation of leaf area index of three forest types in Xiaoxing'an mountains of northeast China. *Chinese Journal of Applied Ecology*, 23(9):2437-2444. (In Chinese with English Abstract)
143. Shi Baoku, Jin Guangze and Wang Zhaoyang. 2012. Temporal and spatial variability in soil respiration in five temperate forests in Xiaoxing'an mountains, China. *Acta Ecologica Sinica*, 32(17):5416-5428. (In Chinese with English Abstract)

144. Xie Yubin, Ma Zunping, Yang Qingsong, Fang Xiaofeng, Zhang Zhiguo, Yan Enrong and Wang Xihua. 2012. Coexistence mechanisms of evergreen and deciduous trees based on topographic factors in Tiantong region, Zhejiang province, eastern China. *Biodiversity Science*, 20:159-167. (In Chinese with English Abstract)
145. Xu Lina and Jin Guangze. 2012. Species composition and community structure of a typical mixed broadleaved-korean pine (*Pinus koraiensis*) forest plot in Liangshui Nature Reserve, northeast China. *Biodiversity Science*, 20(4): 470-481. (In Chinese with English Abstract)
146. Zhang Na, Wang Xihua, Zheng Zemei, Ma Zunping, Yang Qingsong, Fang Xiaofeng and Xie Yubin. 2012. Spatial heterogeneity of soil properties and its relationships with terrain factors I broad-leaved forest in Tiantong of Zhejiang province, east China. *Chinese Journal of Applied Ecology*, 23:2361-2369. (In Chinese with English Abstract)
147. Zhang Shusheng, Bao Yixin, Wang Yanni, Fang Pingfu and Bin Ye. 2012. Activity rhythms of black muntjac (*Muntiacus crinifron*) revealed with infrared camera. *Acta Theriologica Sinica*, 32 (4):368-372. (In Chinese with English Abstract)
148. Zhang Shusheng, Bao Yixin, Wang Yanni, Fang Pingfu and Bin Ye. 2012. Comparisons of different camera trap placement patterns in monitoring mammal resources in Gutianshan National Nature Reserve. *Chinese Journal of Ecology*, 31(8):2016-2022. (In Chinese with English Abstract)
149. Zhong Jundi, Li Xiankun, Lv Shihong, Liu Shengyuan, Lu Maoxin, Chen Yan and Cheng Xialan. 2012. Studies on the stability of different communities in Nonggang karst region of Guangxi. *Carsologica Sinica*, 31(1):22. (In Chinese with English Abstract)

2011

150. Bin Yue, Lian Juyu, Wang Zhangming, Ye Wanhui and Cao Honglin. 2011. Tree mortality and recruitment in a subtropical broadleaved monsoon forest in South China. *Journal of Tropical Forest Science*, 23(1):57-66.
151. Huang Jianxiong, Mi Xiangcheng and Ma Keping. 2011. A genome evolution-based framework for measures of originality for clades. *Journal of Theoretical Biology*, 276:99-105.
152. Lan Guoyu, Hu Yuehua, Cao Min and Zhu Hua. 2011. Topography related spatial distribution of dominant tree species in a tropical rain forest in China. *Forest Ecology and Management*, 262:1507-1513.
153. Pei Nancai, Lian Juyu, Erickson L. David, Swenson G. Nathan, Kress W. John, Ye Wanhui and Ge Xuejun. 2011. Exploring tree-habitat associations in a

- Chinese subtropical forest plot using a molecular phylogeny generated from DNA barcode loci. *PLoS ONE*, 6(6):e21273.
154. Tang Yong, Yang Xiaofei, Cao Min, Baskin C. Carol and Baskin M Jerry. 2011. Buttress trees increase environmental heterogeneity and regulate seedling diversity in a tropical rainforest. *Plant and Soil*, 338:301-309.
155. Wang Xugao, Wiegand Thorsten, Wolf Amy, Howe Robert, Davies J. Stuart and Hao Zhanqing. 2011. Spatial patterns of tree species richness in two temperate forests. *Journal of Ecology*, 99:1382-1393.
156. Yuan Zuoqiang, Wang Xugao, Gazol Antonio, Li Buhang, Lin Fei, Ye Ji, Bai Xuejiao and Hao Zhanqing. 2011. Scale specific determinants of tree diversity in an old growth temperate forest in China. *Basic and Applied Ecology*, 12:488-495.
157. Zhang Liwen, Mi Xiangcheng, Shao Hongbo and Ma Keping. 2011. Strong plant-soil associations in a heterogeneous subtropical broad-leaved forest. *Plant and Soil*, 347:211-220. (IF: 2.773)
158. Bin Yue, Ye Wanhui, Cao Honglin, Huang Zhongliang and Lian Juyu. 2011. Seedling distribution in a subtropical evergreen broad-leaved forest plot in the Dinghu mountain. *Biodiversity Science*, 19(2):127-133. (In Chinese with English Abstract)
159. Cheng Jiajia, Mi Xiangcheng, Ma Keping and Zhang Jintun. 2011. Responses of species-abundance distribution to varying sampling scales in a subtropical broad-leaved forest. *Biodiversity Science*, 19(2):168-177. (In Chinese with English Abstract)
160. Ding Jia, Wu Qian, Yan Hui and Zhang Shouren. 2011. Effects of topographic variations and soil characteristics on plant functional traits in a subtropical evergreen broad-leaved forest. *Biodiversity Science*, 19(2):158-167. (In Chinese with English Abstract)
161. Gong Guiquan, Huang Zhongliang, Huang JianXiong, Ye Wanhui, Cao Honglin, Lian Juyu and Lin Guojun. 2011. How individual species structure the community in Dinghushan 20 ha forest plot? *Ecology and Environmental Sciences*, 20(6-7): 991-995. (In Chinese with English Abstract)
162. Huang Yusong, Lu Maoxin, Yang Jincai and Xu Weibin. 2011. *Didymoplexis vietnamica*, a newly recorded species of *Didymoplexis* (Orchidaceae) from China. *Guihaia*, 31(5): 578-580. (In Chinese with English Abstract)
163. Li Liang, Liu Haifeng, Bai Fan, Zhu Yan, Li Guangqi, Li Wenchao and Sang Weiguo. 2011. Species composition and community structure of four deciduous broadleaved secondary forest in Dongling mountain. *Biodiversity Science*, 19 (2): 243-251. (In Chinese with English Abstract)

164. Liu Haifeng, Li Liang and Sang Weiguo. 2011. Species composition and community structure of the Donglingshan forest dynamic plot in a warm temperate deciduous broad-leaved secondary forest, China. *Biodiversity Science*, 19(2):232-242. (In Chinese with English Abstract)
165. Liu Wenping, Cao Honglin, Liu Wei, Lian Juyu and Wu Linfang. 2011. Study on diversity of monsoon evergreen broad leaved forest in different kinds of habitat in Dinghushan. *Journal of Anhui Agriculture Sciences*, 39(26):16159-16163. (In Chinese with English Abstract)
166. Man Xingxing, Mi Xiangcheng and Ma Keping. 2011. Effects of an ice storm on community structure of an evergreen broadleaved forest in Gutianshan National Nature Reserve, Zhejiang province. *Biodiversity Science*, 19: 197-205. (In Chinese with English Abstract)
167. Niu Hongyu, Wang ZhengFeng, Lian Juyu, Ye Wanhui and Shen Hao. 2011. New progress in community assembly: community phylogenetic structure combining evolution and ecology. *Biodiversity Science*, 19(3):275-283. (In Chinese with English Abstract)
168. Pei Nancai, Zhang Jinlong, Mi Xiangcheng and Ge Xuejun. 2011. Plant DNA barcodes promote the development of phylogenetic community ecology. *Biodiversity Science*, 19(3):284-294. (In Chinese with English Abstract)
169. Song Kai, Mi Xiangcheng, Qi Jia, Ren Haibao, Bebbler Dan and Ma Keping. 2011. Variation in phylogenetic structure of forest communities along a human disturbance gradient in Gutianshan forest, China. *Biodiversity Science*, 19(2): 190-196. (In Chinese with English Abstract)
170. Tang Huaxing, Chen Tianbo, Liu Shengyuan, Nong Dengpan, Meng Yuanjun and Lu Maoxin. 2011. The population dynamics of Francois Langur *Trachypithecus francoisi* in Nonggang Nature Reserve, Guangxi, China. *Sichuan Journal of Zoology*, 30(1):136-140. (In Chinese with English Abstract)
171. Wang Wei, Luo Zhengrong, Zhou Rongfei, Xu Daming, Ai Jianguo and Ding Bingyang. 2011. Habitat associations of woody plant species in Baishanzu subtropical broad-leaved evergreen forest. *Biodiversity Science*, 19(2):134-142. (In Chinese with English Abstract)
172. Wang Yinhua, Mi Xiangcheng, Chen Shengwen, Li Minghong and Yu Mingjian. 2011. Regeneration dynamics of major tree species during 2002-2007 in a subtropical evergreen broad-leaved forest in Gutianshan National Nature Reserve, in east China. *Biodiversity Science*, 19(2):178-189. (In Chinese with English Abstract)
173. Wei Liwang, Li Buhang, Ye Ji, Bai Xuejiao, Yuan Zuoqiang, Xing Dingliang, Lin Fei, Shi Shuai, Wang Xugao and Hao Zhanqing. 2011. Dynamics of short-term tree mortality in broad-leaved korean pine (*Pinus koraiensis*) mixed

- forest in the Changbai Mountains. *Biodiversity Science*, 19(2):260-270. (In Chinese with English Abstract)
174. Wu Qian, Ding Jia, Yan Hui, Zhang Shouren, Fang Teng and Ma Keping. 2011. Effects of simulated precipitation and nitrogen addition on seedling growth and biomass in five tree species in Gutian Mountain, Zhejiang province, China. *Chinese Journal of Plant Ecology*, 35(3):256-267. (In Chinese with English Abstract)
175. Xing Dingliang and Hao Zhanqing. 2011. The principle of maximum entropy and its applications in ecology. *Biodiversity Science*, 19 (3):295-302. (In Chinese with English Abstract)
176. Yang Qingsong, Ma Zunping, Xie Yubin, Zhang Zhiguo, Wang Zhanghua, Liu Heming, Li Ping, Zhang Na, Wang Dali, Yang Haibo, Fang Xiaofeng, Yan Enrong and Wang Xihua. 2011. Community structure and species composition of an evergreen broadleaved forest in Tiantong's 20 ha dynamic plot, Zhejiang province, eastern China. *Biodiversity Science*, 19(2):215-223. (In Chinese with English Abstract)
177. Yuan Zhiliang, Wang Ting, Zhu Xueling, Sha Yingying and Ye Yongzhong. 2011. Patterns of spatial distribution of *Quercus variabilis* in deciduous broadleaf forests in Baotianman Nature Reserve. *Biodiversity Science*, 19(2):224-231. (In Chinese with English Abstract)
178. Zhang Lei, Wang Xiaohe, Mi Xiangcheng, Chen Jianhua and Yu Mingjian. 2011. Temporal dynamics of and effects of an ice storm on litter production in an evergreen broad-leaved forest in Gutianshan National Nature Reserve. *Biodiversity Science*, 19(2):206-214. (In Chinese with English Abstract)
179. Zhu Yan, Bai Fan, Liu Haifeng, Li Wenchao, Guagnqi Li, Wang Shunzhong and Sang Weiguo. 2011. Population distribution patterns and interspecific spatial associations in warm temperate secondary forests, Beijing. *Biodiversity Science*, 19 (2): 252-259. (In Chinese with English Abstract)

2010

180. Bin Yue, Wang Zhigao, Wang Zhangming, Ye Wanhui, Cao Honglin and Lian Juyu. 2010. The effects of dispersal limitation and topographic heterogeneity on beta diversity and phylobetadiversity in a subtropical forest. *Plant Ecology*, 209:237-256.
181. Chen Lei, Mi Xiangcheng, Comita Liza, Zhang Liwen, Ren Haibao and Ma Keping. 2010. Community-level consequences of density dependence and habitat association in a subtropical broad-leaved forest. *Ecology Letters*, 13:695-704.

182. Dong Lei, Wang Zhengfeng, Zhu Peng and Ye Wanhui. 2010. Isolation and characterization of microsatellite loci in *Castanopsis fissa* in lower subtropical China. *Silvae Genetica*, 299-300.
183. Lang C. Anne, Härdtle Werner, Bruelheide Helge, Geibler Christian, Nadrowski Karin, Schuldt Andreas, Yu Mingjian and Oheimb von Goddert. 2010. Tree morphology responds to neighbourhood competition and slope in species-rich forests of subtropical China. *Forest Ecology and Management*, 260:1708-1715.
184. Wang Xugao, Wiegand Thorsten, Hao Zhanqing, Li Buhang, Ye Ji and Lin Fei. 2010. Species associations in an old-growth temperate forest in north-eastern China. *Journal of Ecology*, 98: 674-686.
185. Wang Xugao, Ye Ji, Li Buhang, Zhang Jian, Lin Fei and Hao Zhanqing. 2010. Spatial distributions of species in an old-growth temperate forest, northeastern China. *Canadian Journal of Forest Research*, 40:1011-1019.
186. Wei Shiguang, Li Lin, Walther Bruno, Ye Wanhui, Huang Zhongliang, Cao Honglin, Lian Juyun, Wang Zhigao and Chen Yuyun. 2010. Comparative performance of species-richness estimators using data from a subtropical forest tree community. *Ecological Research*, 25:93-101.
187. Zhang Jian, Song Bo, Li Buhang, Ye Ji, Wang Xugao and Hao Zhanqing. 2010. Spatial patterns and associations of six congeneric species in an old-growth temperate forest. *Acta Oecologica*, 36:29-38.
188. Zhu Yan, Mi Xiangcheng, Ren Haibao and Ma Keping. 2010. Density dependence is prevalent in a heterogeneous subtropical forest. *Oikos*, 119:109-119.
189. Bai Xuejiao, Li Buhang, Zhang Jian, Wei Liwang, Zuoqiang Yuan, Lin Fei and Hao Zhanqing. 2010. Species composition, structure, and spatial distribution of shrubs in broad leaved korean pine (*Pinus koraiensis*) mixed forest in Changbai Mountains. *Chinese Journal of Applied Ecology*, 21(8):1899-1960. (In Chinese with English Abstract)
190. Chen Jinling, Jin Guangze and Zhao Fengxia. 2010. Litter decomposition and nutrient dynamics at different succession stages of typical mixed broadleaved-korean pine forest in Xiaoxing'an Mountains, China. *Chinese Journal of Applied Ecology*, 21(9):2209-2216. (In Chinese with English Abstract)
191. Hu Yuehua, Cao Min and Lin Luxiang, 2010, Dynamics of tree species composition and community structure of a tropical seasonal rain forest in Xishuangbanna, southwest China. *Acta Ecologica Sinica*, 30(4):949-957. (In Chinese with English Abstract)
192. Huang Jianxiong, Zheng Fengying and Mi Xiangcheng. 2010. Influence of environmental factors on phylogenetic structure at multiple spatial scales in an

- evergreen broad-leaved forest of China. *Chinese Journal of Plant Ecology*, 34(3): 309-315. (In Chinese with English Abstract)
193. Jiang Zihan and Jin Guangze. 2010. Effects of selection cutting on diameter growth and vertical growth among major tree species in the mixed broadleaved-korean pine forest. *Acta Ecologica Sinica*, 30(21):5843-5852. (In Chinese with English Abstract)
194. Jiang Zihan and Jin Guangze. 2010. Effects of selective cutting on intra-and interspecies competitions among major tree species in mixed broadleaved-korean pine forest. *Chinese Journal of Applied Ecology*, 21(9):2179-2186. (In Chinese with English Abstract)
195. Jin Guangze, Yang Guiyan, Ma Jianzhang, Li Lanjun, Xu Zhenggang, Zhao Xue and Hong Meijing. 2010. Effect of anthropogenic cone-picking on seed bank and seedling bank of korean pine in the major forest types in Lesser Hing'an Mountains. *Journal of Natural Resources*, 25(11):1845-1854. (In Chinese with English Abstract)
196. Jin Guangze, Li Liangu, Liu Zhili and Kim Ji Hong. 2010. Spatial pattern of *Larix gmelini* in a spruce-fir valley forest of Xiaoxing'an Mountains, China. *Journal of Korean Forest Society*, 99(5):720-725.
197. Lai Jiangshan, Mi Xiangcheng, Ren Haibao and Ma Keping. 2010. Numerical classification of associations in subtropical evergreen broad-leaved forest based on multivariate regression trees—a case study of 24 hm² Gutianshan forest plot in China. *Chinese Journal of Plant Ecology*, 34(7):761-769. (In Chinese with English Abstract)
198. Li Chao, Li Fengri, Wang Shenglei, Yue Shufeng, Wang Xupeng, Liu Yinbang and Jin Guangze. 2010. Stumpage coordinate extraction based on large-scale aerial photographs. *Journal of Northeast Forestry University*, 138(12):31-34 (In Chinese with English Abstract)
199. Li Li, Chen Jianhua, Ren Haibao, Mi Xiangcheng, Yu Mingjian and Yang Bo. 2010. Spatial patterns of *Castanopsis eyrei* and *Schima superba* in mid-subtropical broadleaved evergreen forest in Gutianshan National Nature Reserve, China. *Chinese Journal of Plant Ecology*, 34(3):241-252. (In Chinese with English Abstract)
200. Lin Guojun, Huang Zhongliang, Zhu Lin and Ouyang Xuejun. 2010. Beta diversity of forest community on Dinghushan. *Acta Ecologica Sinica*, 30(18):4875-4880. (In Chinese with English Abstract)
201. Liu Yanyan and Jin Guangze. 2010. Character of coarse woody debris in a mixed broad-leaved korean pine forest in Xiaoxing'an Mountains, China. *Scientia Silvae Sinicae*, 46(4): 8-14. (In Chinese with English Abstract)

202. Liu Yanyan and Jin Guangze. 2010. Spatial point pattern analysis for coarse woody debris in a mixed broadleaved-korean pine forest in Xiaoxing'an Mountains, China. *Acta Ecologica Sinica*, 30(22): 6072-6081. (In Chinese with English Abstract)
203. Liu Yanyan, Jin Guangze and Li Ru. 2010. Storage characteristics of coarse woody debris in a mixed broadleaved-korean pine forest in Xiaoxing'an Mountains, China. *World Forestry Research*, 23(9): 24-30. (In Chinese with English Abstract)
204. Yang Xiaofei, Tang Yong and Cao Min. 2010. Diaspore traits of 145 tree species from a tropical seasonal rain forest in Xishuangbanna, SW China. *Acta Botanica Yunnanica*, 32:367-377. (In Chinese with English Abstract)
205. Yuan Zuoqiang, Li Buhang, Bai Xuejiao, Lin Fei, Shi Shuai, Ye Ji, Wang Xugao and Hao Zhanqing. 2010. Composition and seasonal dynamics of litter falls in a broad leaved korean pine (*Pinus koraiensis*) mixed forest in Changbai Mountains, northeast China. *Chinese Journal of Applied Ecology*, 21(9):2171-2178. (In Chinese with English Abstract)

2009

206. Chen Guoke, Kéry Marc, Zhang Jinlong and Ma Keping. 2009. Factors affecting detection probability in plant distribution studies. *Journal of Ecology*, 97(6):1383-1389.
207. Du Yanjun, Mi Xiangcheng, Ren Haibao, Liu Xiaojuan, Chen Lei, Fang Teng, Zhu Yan and Ma Keping. 2009. Seed dispersal phenology and dispersal syndromes in a subtropical broad-leaved forest of China. *Forest Ecology and Management*, 258(7):1147-1152.
208. Huang Guomin, Hong Lan, Ye Wanhui, Shen Hao, Cao Honglin and Xiao Wei. 2009. Isolation and characterization of polymorphic microsatellite loci in *Castanopsis chinensis* Hance (Fagaceae). *Conservation Genetics*, 10:1069-1071.
209. Lai Jiangshan, Mi Xiangcheng, Ren Haibao and Ma Keping. 2009. Species-habitat associations change in a subtropical forest of China. *Journal of Vegetation Science*, 20:415-423.
210. Li Lin, Wei Shiguang, Huang Zhongliang, Ye Wanhui, Cao Honglin, Wang Zhigao, Lian Juyu, Sun I-Fang, Ma Keping and He Fangliang. 2009. Spatial distributions of tree species in a subtropical forest of China. *Oikos*, 118:495-502.
211. Shen Guochun, Yu Mingjian, Xinsheng Hu, Mi Xiangcheng, Ren Haibao, Sun I-Fang and Ma Keping. 2009. Species-area relationships explained by the joint effects of dispersal limitation and habitat heterogeneity. *Ecology*, 90(11):3033-3041.

212. Wang Xugao, Hao Zhanqing, Zhang Jian, Lian Juyu, Li Buhang and Xiaoyao Lin. 2009. Tree size distributions in an old-growth temperate forest. *Oikos*, 118:25-36.
213. Wang Zhigao, Ye Wanhui, Cao Honglin, Huang Zhongliang, Lian Juyu, Li Lin, Wei Shiguang and Sun I-Fang. 2009. Species-topography association in a species-rich subtropical forest of China. *Basic and Applied Ecology*, 10:648-655.
214. Zhang Jian, Hao Zhanqing, Song Bo, Li Buhang, Wang Xugao and Ye Ji. 2009. Fine-scale species co-occurrence patterns in an old-growth temperate forest. *Forest Ecology and Management*, 257(10):2115-2120.
215. Zhang Jian, Hao Zhanqing, Sun I-Fang, Song Bo, Ye Ji, Li Buhang and Wang Xugao. 2009. Density dependence on tree survival in an old-growth temperate forest in northeastern China. *Annals of Forest Science*, 66(2):204p1-9.
216. Zhang Xin, Ye Wanhui, Cao Honglin, Wang Zhengfeng, Shen Hao and Lian Juyu. 2009. Isolation and characterization of microsatellites in Chinese white olive (*Canarium album*) and cross-species amplification in *Canarium pimela*. *Conservation Genetics*, 10:1833-1835.
217. Zhu Peng, Ye Wanhui, Wang Zhengfeng, Cao Honglin, Zhang Min, Li Ling and Xiao Wei. 2009. Isolation and characterization of ten polymorphic microsatellite in the endangered tree *Erythrophleum fordii* Oliv. *Conservation Genetics*, 10:1017-1019.
218. Legendre Pierre, Mi Xiangcheng, Ren Haibao, Ma Keping, Yu Mingjian, Sun I-Fang and He Fangliang. 2009. Partitioning beta diversity in a subtropical broad-leaved forest of China. *Ecology*, 90(3):663-674.
219. Chen Ying. 2009. Detection effect of phylogenetic diversity on seedling mortality in an evergreen broad-leaved forest in China. *Chinese Journal of Plant Ecology*, 33(6):1084-1089. (In Chinese with English Abstract)
220. Chen Zhen and Zhu Hua. 2009. Investigation on the flora of herbaceous plants under the tropical rain forest of Xishuangbanna. *Journal of Northwest Forestry University*, 4(1):11-15. (In Chinese with English Abstract)
221. Hu Zhenghua, Qian Haiyuan and Yu Mingjian. 2009. The niche of dominant species populations in *Castanopsis eyrei* forest in Gutian Mountain National Nature Reserve. *Acta Ecologica Sinica*, 29(7):3670-3677. (In Chinese with English Abstract)
222. Jin Guangze, Liu Zhili, Cai Huiying, Bingyang Tai, Xiaolan Jiang and Liu Yanyan. 2009. Coarse woody debris (CWD) in a spruce-fir valley forest in Xiaoxing'an mountains, China. *Journal of Natural Resources*, 24(7):1256-1266. (In Chinese with English Abstract)
223. Jin Guangze, Li Zhihong, Tang Yan and Kim Ji Hong. 2009. Spatial distribution pattern and association of crowns and saplings for major tree species in the mixed

- broadleaved-korean pine forest of Xiaoxing'an mountains, China. *Journal of Korean Forest Society*, 98(2):189-196.
224. Liang Xiaoli, Wang Hong, Zhen Zheng, Lin Luxiang, Deng Xiaobao and Cao Min. 2009. Composition, spatial distribution and survival during the dry season of tree seedlings in a tropical forest in Xishuangbanna, SW China. *Chinese Journal of Plant Ecology*, 33(4): 658-671. (In Chinese with English Abstract)
225. Liu Yanyan and Jin Guangze. 2009. Influence of topography on coarse woody debris in a mixed broadleaved-korean pine forest in Xiaoxing'an mountains, China. *Acta Ecologica Sinica*, 29(3):1398-1407. (In Chinese with English Abstract)
226. Zhang Jian, Li Buhang, Bai Xuejiao, Yuan Zuoqiang, Wang Xugao, Ye Ji and Hao Zhanqing. 2009. Composition and interannual dynamics of tree seedlings in broad-leaved korean pine (*Pinus koraiensis*) mixed forest in Changbai Mountain. *Biodiversity Science*, 17(4):385-396. (In Chinese with English Abstract)
227. Zhu Yan, Mi Xiangcheng and Ma Keping. 2009. A mechanism of plant species coexistence: the negative density-dependent hypothesis. *Biodiversity Science*, 17(6):594-604. (In Chinese with English Abstract)

2008

228. Li Lin, Wei Shiguang, Huang Zhongliang, Ye Wanhui and Cao Honglin. 2008. Spatial patterns and interspecific associations of three canopy species at different life stages in a subtropical forest, China. *Journal of Integrative Plant Biology*, 50(9):1140-1150.
229. Wang Xugao, Hao Zhanqing, Ye Ji, Zhang Jian, Li Buhang and Yao Xiaolin. 2008. Spatial pattern of diversity in an old-growth temperate forest in northeastern China. *Acta Oecologica*, 33:345-354.
230. Wang Xugao, Hao Zhanqing, Ye Ji, Zhang Jian, Li Buhang and Yao Xiaolin. 2008. Spatial variation of species diversity across scales in an old-growth temperate forest of China. *Ecological Research*, 23:709-717.
231. Hao Zhanqing, Li Buhang, Zhang Jian, Wang Xugao, Ye Ji and Yao Xiaolin. 2008. Broad-leaved korean pine (*Pinus koraiensis*) mixed forest plot in Changbaishan (CBS) of China: community composition and structure. *Chinese Journal of Plant Ecology*, 32(2):238-250. (In Chinese with English Abstract)
232. Hao Zhanqing, Zhang Jian, Li Buhang, Ye Ji, Wang Xugao and Yao Xiaolin. 2008. Natural secondary poplar-birch forest in Changbai Mountain: species composition and community structure. *Chinese Journal of Plant Ecology*, 32(2):251-261. (In Chinese with English Abstract)

233. Jin Guangze, Zhao Fengxia, Li Liangu and Kim Ji Hong. 2008. The production and spatial heterogeneity of litterfall in the mixed broadleaved-korean pine forest of Xiaoxing'an Mountains, China. *Journal of Korean Forest Society*, 97(2):165-170.
234. Lan Guoyu, Hu Yuehua, Cao Min, Zhu Hua, Wang Hong, Zhou Shihhun, Deng Xiaobao, Cui Jingyun, Huang Jianguo, Liu Linyun, Xu Hailong, Song Junping and He Youcai. 2008. Establishment of Xishuangbanna tropical forest dynamics plot: species compositions and spatial distribution patterns. *Chinese Journal of Plant Ecology*, 32(2):287-298. (In Chinese with English Abstract)
235. Li Buhang, Zhang Jian, Yao Xiaolin, Ye Ji, Wang Xugao and Hao Zhanqing. 2008. Seasonal dynamics and spatial distribution patterns of herbs diversity in broadleaved korean pine (*Pinus koraiensis*) mixed forest in Changbai Mountains. *Chinese Journal of Applied Ecology*, 19(3):467-473. (In Chinese with English Abstract)
236. Liu Shuang and Jin Guangze. 2008. Spatiotemporal dynamics of seed rain in a broadleaved-korean pine mixed forest in Xiaoxing'an mountains, China. *Acta Ecologica Sinica*, 28(11):5731-5740. (In Chinese with English Abstract)
237. Wang Xugao, Hao Zhanqing, Ye Ji, Zhang Jian, Li Buhang and Yao Xiaolin. 2008. Relationships between species abundance and spatial distribution pattern of broad-leaved korean pine (*Pinus koraiensis*) mixed forest in Changbai mountains of China. *Chinese Journal of Ecology*, 27(2):145-150. (In Chinese with English Abstract)
238. Wang Zhigao, Ye Wanhui, Cao Honglin and Lian Juyu. 2008. Spatial distribution of species diversity indices in a monsoon evergreen broadleaved forest at Dinghushan Mountain. *Biodiversity Science*, 16(5):454-461. (In Chinese with English Abstract)
239. Wei Shiguang, Li Lin, Liu Haigang, Du Yanjun and Huang Zhongliang. 2008. Analyses of the dynamic state of *Erythrophleum fordii* population. *Ecology and Environment*, 17(1):285-289. (In Chinese with English Abstract)
240. Yao Xiaolin, Piao Zhengji, Li Buhang, Zhang Jian, Wang Xugao, Ye Ji and Hao Zhanqing. 2008. *Pinus koraiensis* seed consumption by rodents and birds. *Chinese Journal of Applied Ecology*, 19(8):1759-1763. (In Chinese with English Abstract)
241. Ye Wanhui, Cao Honglin, Huang Zhongliang, Lian Juyu, Wang Zhigao, Li Lin, Wei Shiguang and Wang Zhangming. 2008. Community structure of a 20 hm² lower subtropical evergreen broad-leaved forest plot in Dinghushan, China. *Chinese Journal of Plant Ecology*, 32(2):274-286. (In Chinese with English Abstract)

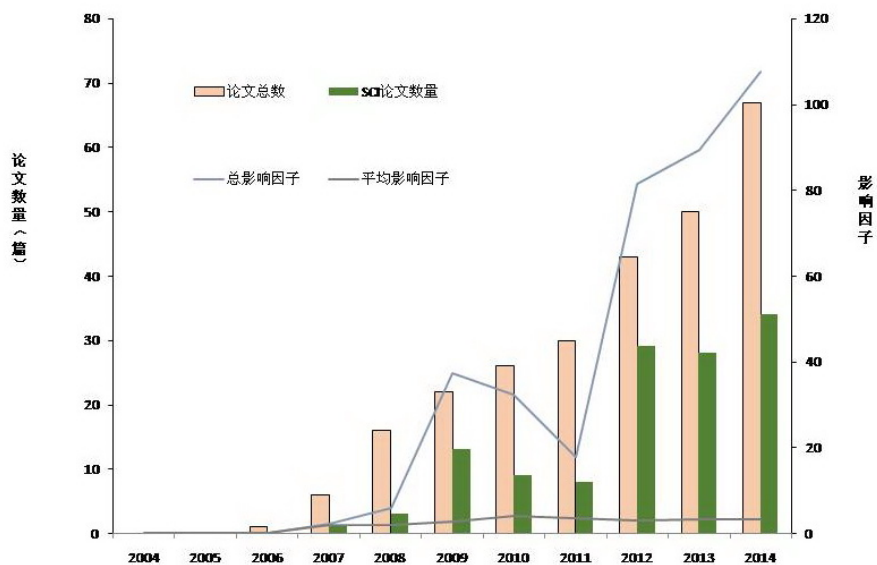
242. Zhang Jian, Hao Zhanqing, Li Buhang, Ye Ji, Wang Xugao and Yao Xiaolin. 2008. Composition and seasonal dynamics of seed rain in broad-leaved Korean pine (*Pinus koraiensis*) mixed forest, Changbai Mountain. *Acta Ecologica Sinica*, 28(6):2445-2454. (In Chinese with English Abstract)
243. Zhu Yan, Zhao Gugfeng, Zhang Liwen, Shen Guochun, Mi Xiangcheng, Ren Haibao, Yu Mingjian, Chen Jianhua, Chen Shengwen, Fang Teng and Ma Keping. 2008. Community composition and structure of Gutianshan forest dynamic plot in a mid-subtropical evergreen broad-leaved forest, east China. *Chinese Journal of Plant Ecology*, 32(2):262-273. (In Chinese with English Abstract)

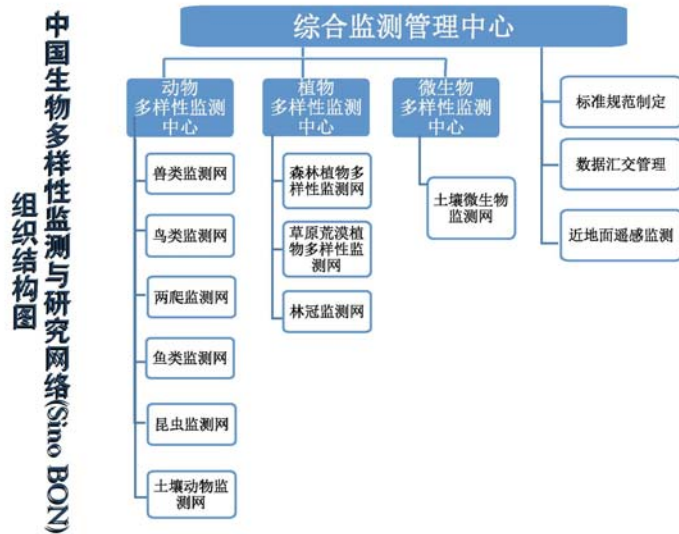
2007

244. Hao Zhanqing, Zhang Jian, Song Bo, Ye Ji and Li Buhang. 2007. Vertical structure and spatial associations of dominant tree species in an old-growth temperate forest. *Forest Ecology and Management*, 252:1-11.
245. Gong Guiquan, Chen Jimin, Mi Xiangcheng, Chen Shengwen and Fang Teng. 2007. Habitat associations of wood species in the Gutianshan subtropical broad-leaved evergreen forest. *Science of Soil and Water Conservation*, 5:79-83. (In Chinese with English Abstract)
246. Jin Guangze, Li Ru, Li Zhihong and Jin Hong Kim. 2007. Spatial pattern of *Acer tegmentosum* in the mixed broadleaved-Korean pine forest of Xiaoxing'an Mountains, China. *Journal of Korean Forest Society*, 96(6):730-736.
247. Jin Guangze, Liu Yanyan, Liu Shuang and Jin Hong Kim. 2007. Effect of gaps on species diversity in the naturally regenerated mixed broadleaved-Korean pine forest of the Xiaoxing'an Mountains, China. *Journal of Ecology and Field Biology*, 30(4): 325-330.
248. Jin Guangze, Yueying Tian, Zhao Fengxia and Jin Hong Kim. 2007. The pattern of natural regeneration by gap size in the broadleaved-Korean pine mixed forest of Xiaoxing'an mountains, China. *Journal of Korean Forest Society*, 96(2):227-234.
249. Zhang Jian, Hao Zhanqing, Song Bo, Ye Ji, Li Buhang and Yao Xiaolin. 2007. Spatial distribution patterns and associations of *Pinus koraiensis* and *Tilia amurensis* in broad-leaved Korean pine mixed forest in Changbai mountains. *Chinese Journal of Applied Ecology*, 18(8):1681-1687. (In Chinese with English Abstract)

2006

250. Jin Guangze, Xie Xingci, Tian Yueying and Kim Jin Hong. 2006. The pattern of seed rain in the broadleaved-korean pine mixed forest of Xiaoxing'an Mountains, China. *Journal of Korean Forest Society*, 95(5): 621-627.





参考文献

- Anderson-Teixeira KJ, Davies SJ, Bennett AC, Gonzalez-Akre EB, Muller-Landau HC, Wright SJ, Salim KA, Zambrano AMA, Alonso A, Baltzer JL, Basset Y, Bourg NA, Broadbent EN, Brockelman WY, Bunyavejchewin S, Burslem DFRP, Butt N, Cao M, Cardenas D, Chuyong GB, Clay K, Cordell S, Dattaraja HS, Deng XB, Detto M, Du XJ, Duque A, Erikson DL, Ewango CEN, Fischer GA, Fletcher C, Foster RB, Giardina CP, Gilbert GS, Gunatilleke N, Gunatilleke S, Hao ZQ, Hargrove WW, Hart TB, Hau BCH, He FL, Hoffman FM, Howe RW, Hubbell SP, Inman-Narahari FM, Jansen PA, Jiang MX, Johnson DJ, Kanzaki M, Kassim AR, Kenfack D, Kibet S, Kinnaird MF, Korte L, Kral K, Kumar J, Larson AJ, Li YD, Li XK, Liu SR, Lum SKY, Lutz JA, Ma KP, Maddalena DM, Makana J-R, Malhi Y, Marthews T, Serudin RM, McMahon SM, McShea WJ, Memiaghe HR, Mi XC, Mizuno T, Morecroft M, Myers JA, Novotny V, de Oliveira AA, Ong PS, Orwig DA, Ostertag R, den Ouden J, Parker GG, Phillips RP, Sack L, Sainge MN, Sang WG, Sri-ngernyuang K, Sukumar R, Sun I-F, Sungpalee W, Suresh HS, Tan S, Thomas SC, Thomas DW, Thompson J, Turner BL, Uriarte M, Valencia R, Vallejo MI, Vicentini A, Vrška T, Wang XH, Wang XG, Weiblen G, Wolf A, Xu H, Yap S, Zimmerman J (2014) CTFIS-ForestGEO: a worldwide network monitoring forests in an era of global change. *Global Change Biology*, doi: 10.1111/gcb.12712.
- Ma KP (马克平) (2011a) Strategic targets for biodiversity conservation in 2011–2020. *Biodiversity Science* (生物多样性), **19**, 1–2. (in Chinese)
- Ma KP (马克平) (2011b) Assessing progress of biodiversity conservation with monitoring approach. *Biodiversity Science* (生物多样性), **19**, 125–126. (in Chinese)
- Ma KP (马克平) (2014) Ten years development of Chinese Forest Biodiversity Monitoring Network(CForBio). *Chinese Science Bulletin* (科学通报), **59**, 2331–2332. (in Chinese)