

“绿都北京”研究系列丛书

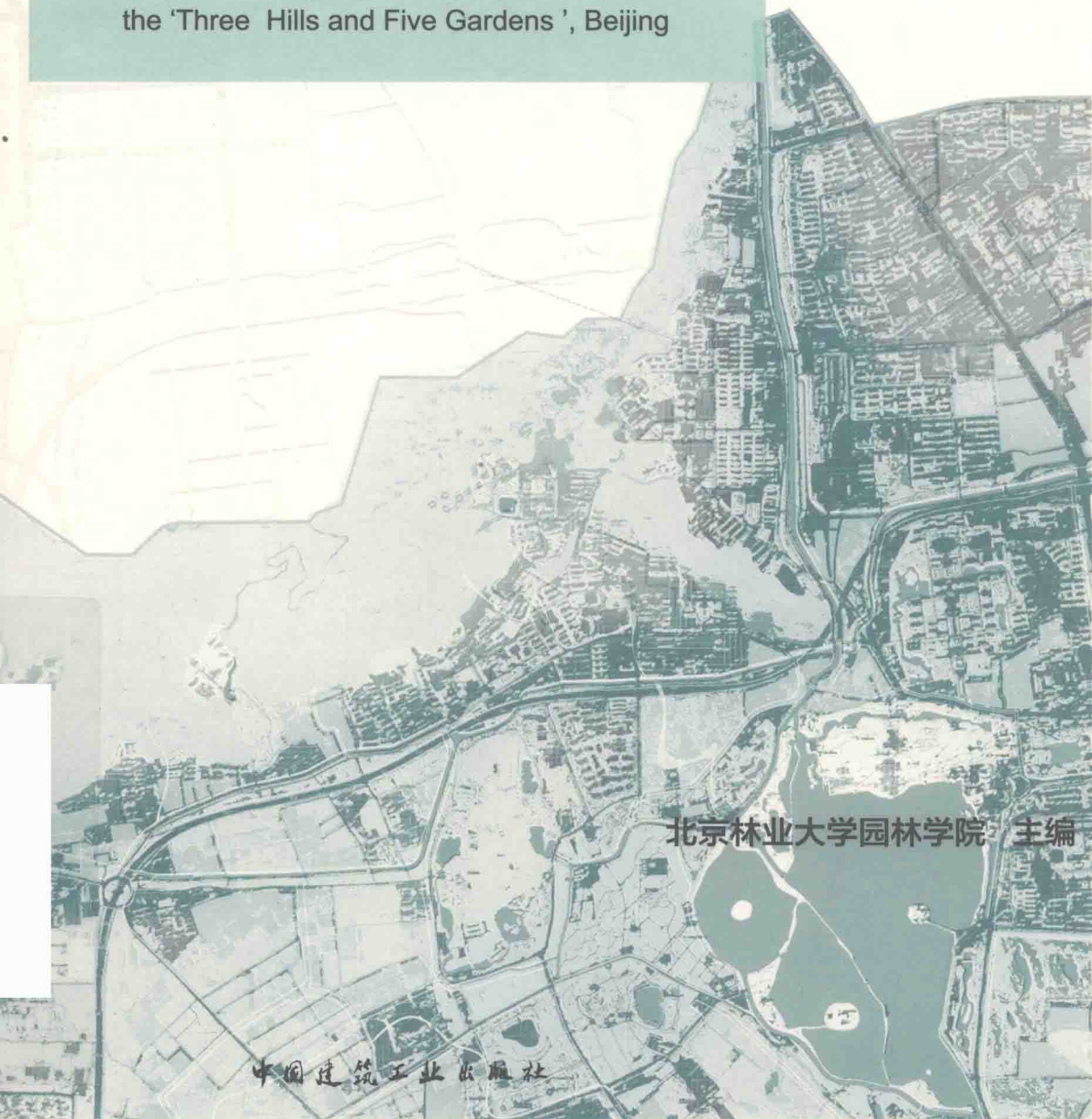
Green Beijing Research Series

北京三山五园地区绿道 规划与设计研究

Planning and Design of Greenways in the Areas of
the 'Three Hills and Five Gardens', Beijing

北京林业大学园林学院 主编

中国建筑工业出版社



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图书在版编目(CIP)数据

北京三山五园地区绿道规划与设计研究/北京林业大学
园林学院主编. —北京: 中国建筑工业出版社, 2018.4
(“绿都北京”研究系列丛书)
ISBN 978-7-112-22024-3

I. ①北… II. ①北… III. ①道路绿化-绿化规划-研究-北京 IV. ①TU985.18

中国版本图书馆 CIP 数据核字 (2018) 第 060699 号

责任编辑: 杜 洁 李玲洁
责任校对: 焦 乐

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中国建筑工业出版社出版、发行(北京海淀三里河路9号)
各地新华书店、建筑书店经销
北京方嘉彩色印刷有限责任公司印刷

*

开本: 787×1092毫米 1/16 印张: 11³/₄ 字数: 387千字
2018年4月第一版 2018年4月第一次印刷
定价: 99.00元

ISBN 978-7-112-22024-3

(31907)

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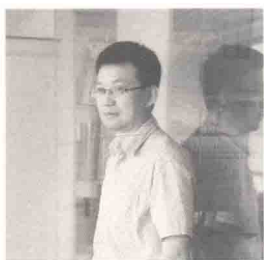
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本研究由城乡生态环境北京实验室支持



前言

美国著名风景园林师西蒙兹（John Simonds 1913-2005）出版过一本文集 Lessons（中文版书名为《启迪》），书中有一篇文章记录了西蒙兹 1939 年到北平考察的经历。

在北京，西蒙兹拜访了一位祖上曾经参与规划了元大都的李姓建筑师，李先生非常赞赏他能到北京考察风景规划，并向西蒙兹简单地介绍了元大都的规划思想。“在这片有良好水源的平原上，将建设一个伟大的城市——人们在这里可以与上天、自然以及同伴们和谐共处”。“蓄水池以自然湖泊的面貌贯穿整个都城，挖出的土用来堆成湖边的小山，湖边和山上种植了从全国各地收集来的树木和花灌木”。“关于公园事宜和开放空间，可汗命令不能有孤立的公园。更准确地说，整个大都城将被规划成一个巨大而美丽的花园式公园，期间散布宫殿、庙宇、公共建筑、民居和市场，全都有机地结合在一起”。“从文献中我了解到北平被一些来此旅游的人称为世界上最美丽的城市，我不知道这是否正确。如果真是这样，那么这种美丽不是偶然形成的，而是从最大的布局构思到最小的细节——都是通过这样的方法规划而成的。”

北京的确如西蒙兹在文章中提到的李姓建筑师所说，是一座伟大的城市，也是一个巨大而美丽的花园式都城。

北京有着优越的地理条件，城市的西、北和东北被群山环绕，东南是平原。市域内有 5 条河流，其中的永定河在历史上不断改道，在这片土地上形成广阔的冲积扇平原，留下了几十条故道，这些故道随后演变为许多大大小小的湖泊，有些故道转为地下水流，在某些地方溢出地面，形成泉水。

北京又有着 3000 年的建城史。李先生提到的元大都已将人工的建造与自然环境完美地叠加融合在一起，到了清朝时期，北京城人工与自然的融合更加紧密完善。城市西北郊建造了三山五园园林群，西山和玉泉山的汇水和众多泉流汇纳在一起，形成这些园林中的湖泊，水又通过高粱河引入城市，串联起城中的一系列湖泊。许多宫苑、坛庙、王府临水而建，水岸也是城市重要的开放空间。城中水系再通过运河向东接通大运河。由此，北京城市内外的自然景观成为一个连贯完整的体系，这一自然系统承担着调节雨洪、城市供水、漕运、灌溉、提供公共空间、观光游览、塑造城市风貌等复合的功能。城市居住的基本单元——四合院平铺在棋盘格结构的城市中，但每一个四合院的院子里都有别样的风景，每个院子都种有大树，如果从空中鸟瞰，北京城完全掩映在绿色的海洋之中。

然而，随着人口的增加和城市建设的发展，北京的环境在迅速地变化着，古老的护城河早已消失，一起消失的还有城市中的不少湖泊和池塘。特别是快速城市化以来，北京的变化更为剧烈。老城中低矮的四合院被高楼大厦取代，步行尺度的胡同变成了宽阔的道路。老城之外，城市建设不断向周边蔓延，侵占着田野、树林和湿地，城市内外完整的自然系统被阻断，积极的公共空间不断消失，而交通设施的无限扩张，又使得城市被快速路不断地切割，城市渐渐失去了人性化的尺度、也渐渐失去了固有的个性与特色。

面对自然系统的断裂和公共空间的破碎与缺失等城市问题，作为风景园林、城市规划和建筑学的教育和研究者，我们看到了通过维护好北京现有的自然环境和公园绿地，利用北京的河道、废弃的铁路和城市中的开放土地，改造城市快速交通环路，建设一条条绿色的廊道，并形成城市中一个完整的绿色生态网络，从而再塑北京完整的自然系统和公共空间体系的巨大机会。

这条绿色的生态网络可以重新构筑贯穿城市内外的连续自然系统，使得城市的人工建造与自然环境有机地融合在一起；这个网络可以将由于建造各种基础设施而被隔离分割的城市重新连接并缝合起来，形成城市的公共空间体系；这个网络可以承载更加丰富多彩的都市生活，成为慢行系统、游览、休憩和运动的载体，也成为人们认知城市、体验城市的场所；这个网络还可以带来周边地区更多的商业机会，促进周围社区的活力；这个网络更是城市中重要的绿色基础设施，承担着雨洪管理、气候调节、生态廊道、生物栖息场构建、生物多样性保护的关键作用……

这套丛书收录的是我们对北京绿廊和生态网络构建的研究和设想。当然，畅想总是容易的，而实施却面临着巨大的困难和不确定性，但是我们看到，世界上任何伟大的城市之所以能够建成，就是从畅想开始的，如同元大都的建设一样。

在《启迪》中那篇谈到北京的文章最后，西蒙兹总结到：“要想规划一个伟大的城市，首先要学习规划园林，两者的原理是一样的”。

我们的研究实质上就是以规划园林的方式来改良城市，希望我们的这些研究成果也能对北京未来的建设和发展有所启迪。



2018年1月

Forewords

The famous US landscape architect John Simonds once published a corpus named 'Lessons', and one of the articles in this book records the experience of Simonds's investigation to Beijing in 1939.

Simonds visited an architect surnamed Li whose ancestors once took part in planning of the Great Capital of Yuan in Beijing, and the architect admired that Simonds came to Beijing to study landscape planning. He also briefly introduced the planning thoughts of the Great Capital of Yuan to Simonds's group. According to architect Li, here on this well-watered plain, was to be built a great city in which man would find himself in harmony with God, with nature, and his fellow man. Throughout the capital were to be located reservoirs in the form of lakes and lagoons, the soil formed their excavations to be shaped into enfolding hills, planted with trees and flowering shrubs collected from the farthest reaches of his dominion. As for the matter of parks and open spaces, architect Li said the Khan decreed that no separate parks were to be set aside. Rather, the whole of Ta-Tu would be planned as one great inter-related garden-park, with palaces, temples, public buildings, homes and market places beautifully interspersed. He also added that he was led to believe that Peking (now present day Beijing) was regarded by some who have travelled here to be the most beautiful city of the world, which he could not know to be true. If so, it would be no happenstance, for from the broadest concept to the least detail – it was planned that way.

Just like what architect Li mentioned, Beijing is indeed a great city, also a grand gorgeous garden capital.

With superior geographical condition, Beijing city is surrounded by mountains in the west, north and northeast direction, and the southeast of the city is plain. There are 5 rivers in the city. Among them, the Yongding River has constant change of course in history, thus formed the vast alluvial fan plain here and has left dozens of old river courses. These old water courses then evolved into lakes with different scales, some even transformed into underground water streams and overflowed to the ground to form springs.

At the same time, Beijing has a history of 3000 years of city construction. As architect Li said, the Great Capital of Yuan has integrated the artificial construction and the natural environment perfectly. And when it came to Qing Dynasty, the integration of labor and nature is even more perfect in Beijing city. People built the 'Three Hills and Five Gardens' in the northwest of the city, so that the catchments of the West Mountain and Yuquan Mountain could join numerous springs together, and formed the lakes in these royal gardens. Then, water was introduced into the city through the Sorghum River, and thus a series of lakes inside the city are connected. Plenty of palatial gardens, temples and mansions of monarch were built in the waterfront, which makes the water bank an important open space for the whole city. The river system in the city heads for the east and connects to the Grand Canal, which makes the nature environment inside and outside the city into a coherent and complete system, which takes the charge of compound functions including the regulation of rain flood, city water supply, water transport, irrigation, providing public space, sightseeing function and shaping the cityscape. As the basic unit of urban living, Siheyuans are paved in the city with chessboard structure. Uniformed as they are in appearance, we can still see unique landscape and stories in each different courtyard. There are big trees thriving in each courtyard, as if they were telling the history of each family. If we have a bird's eye view from the air, Beijing will be completely covered in the green ocean.

However, with the population increase and the urban construction development, the environment of Beijing has been changing rapidly. The ancient moat has already disappeared, together with many lakes and ponds in the city. Beijing has changed even more fast and violent since the rapid urbanization. Low Siheyuans have been replaced by skyscrapers, and Hutongs of walking scale also became broad roads for vehicles. Apart from the Old City, the urban construction in Beijing has been spreading to the surrounding area, invading the fields, forests and wetlands. As a result, the holistic natural system both inside and outside the city is blocked, active public space is disappearing, and the unlimited expansion of transportation facilities make the city constantly cut by express ways. We cannot deny that the city has gradually lost its humanized scale, and it has also gradually lost its inherent personality and characteristics.

In face of the city fracture problems of natural systems and the broken public space, as landscape architects, urban planners, architecture educators and researchers, we see huge opportunities to maintain the existing natural environment and garden greenways, use the river courses, disused railways and open lands in Beijing to reform the city fast traffic roads and construct several green corridors in order to form a complete green ecological network in the city, and remold integrated natural system and public space system in Beijing.

This green ecological network can reconstruct the continuous natural system running throughout the city, so that the artificial construction of the city can be organically integrated with the natural environment. The network can connect and stitch the city divided by all kinds of infrastructure, and form a public space system in Beijing. What's more, the network can carry more colorful urban life styles and become the supporter of slow travel system, sightseeing, recreation and sports, and it will turn into a place for people to cognize and experience the city. It can also bring more business opportunities in the surrounding areas to promote the vitality of the communities in the neighborhood. Above all, the network is a significant ecological infrastructure in the city, which plays key roles in rain and flood management, climate regulation, ecological corridors, biological habitat construction and biodiversity conservation, etc.

This collection includes our researches and thinking of greenways and the construction of ecological corridor network in Beijing. It is without doubts that imagination is always easy, while implementation is always faced with great difficulties and uncertainties. But we can see that any great city in the world was finally built up based on the imaginations in the beginning, just like the construction of the Great Capital of Yuan.

In the article about Beijing from 'Lessons', Simonds concluded that: If you want to plan a great city, you need to learn to plan gardens first, for the principles of both are the same.

Essentially, our research is to explore a way to improve a city in the way of planning gardens, and we do hope that our research results may enlighten the future construction and development in Beijing.

Wang Xiangrong
January, 2018

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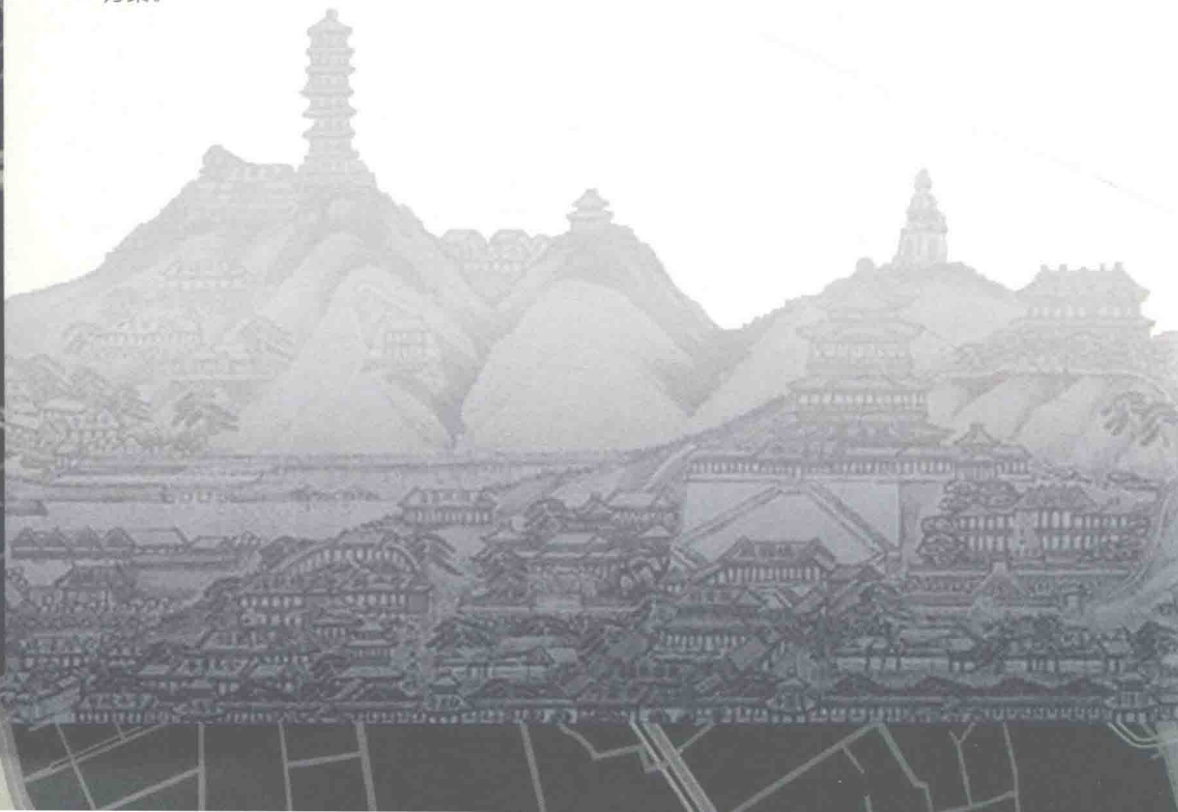
Introduction of the Course

本课题是“绿都北京”系列研究之一，旨在把握“人居环境学科群”发展前沿，构建国内首创的以风景园林规划设计研究为核心，融合城市规划、建筑设计、园林历史、生态环境、植物景观、园林工程等多领域问题于一体的综合研究框架。

本课题聚焦于北京西北郊著名的三山五园地区。该地区地理环境条件得天独厚，自北京建城以来就成为维持城市生存最重要的水源地和自然生态屏障，清代盛期以来，随着皇家园林和行宫等的兴建而逐渐成为北京城最集中的自然、文化遗产聚集区，也是中国传统人居理念中城市与风景完美融合的代表，堪称世界级“自然和人类的共同杰作”。

新中国成立以来，在北京历次城市总体规划中，尽管对以颐和园、圆明园为代表的历史名园保护都提到了相当的高度，但“三山五园”却几乎从未被作为整体来考虑。近年来，随着北京城市建设的进一步扩张，该地区承担的城市职能愈发复杂，整体景观格局逐步解体，其遗憾不亚于对北京老城的破坏。如何充分发掘和积极保护该特殊地区的自然文化价值，以及在与城市发展协调的同时，如何逐步提升环境品质，已成为北京未来城市发展中极为复杂和重要的问题。

因此，本课题力图积极利用景观生态网络构建、城市历史景观认知、绿道规划建设等领域的前沿理论和科学分析方法，与现实情况紧密结合，从整体和局部两个层次，创造性地提出既有前瞻性、又具备可行性的系统性城市绿色空间提升、文化景观格局重塑方案。

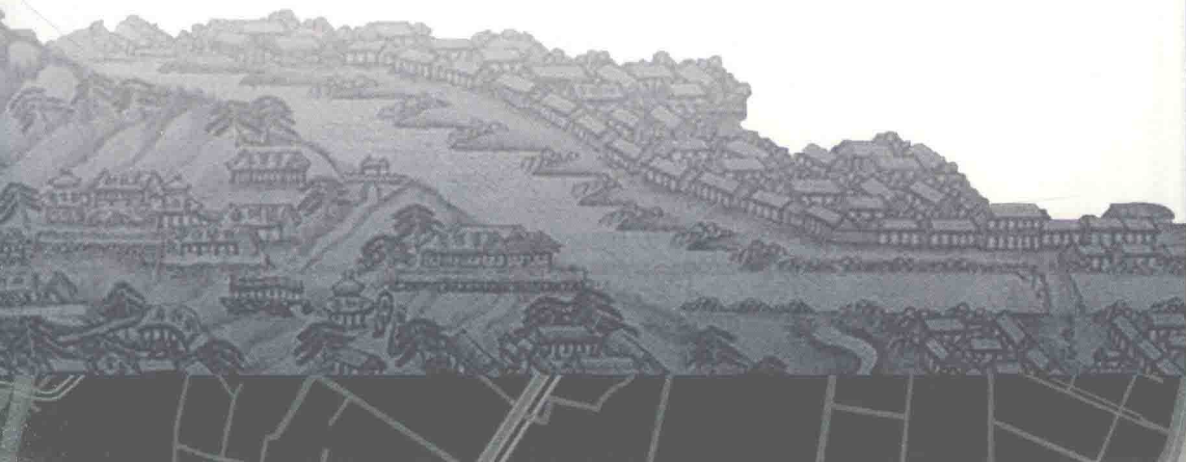


Our subject is one of the 'Green Beijing Research Series' ongoing. We aim to grasp the frontiers of the human settlement environment subject, and then build a comprehensive research framework based on the research of landscape planning and design at first hand on China, integrating subjects of urban planning, architectural design, landscape history, ecological environment, vegetation landscape and garden engineering as a whole.

Our subject mainly focuses on the well-known 'Three Hills and Five Gardens' area in the northwestern suburb of Beijing. The region is richly endowed by nature with unique geographical environment, and it has become the most important water source and natural ecological barrier to maintain survival since the construction of Beijing began. With the constructions of royal gardens and palace museums since the prosperous period of Qing Dynasty, the area has gradually become the most concentrated area of natural and cultural heritage in Beijing. It is also the representative of the perfect fusion of urban and landscape in the traditional Chinese human habitat concept, which can be regarded as a world-class masterpiece of human and nature.

Since the establishment of People's Republic of China, although the protection of historic parks represented by Summer Palace and Yuan Ming Yuan has referred to a considerable height in the previous overall planning of Beijing, it cannot be ignored that the 'Three Hills and Five Gardens' area has almost never been considered as a whole. Recently, with the further expansion of urban construction in Beijing, the functions undertaken by this area are becoming more and more complex. We can see that the overall landscape pattern in this area is gradually disintegrated, which is regretful no less than the destruction of Beijing Old City. Problems about how to fully explore and actively protect the natural and cultural value of the area, and how to gradually improve the environmental quality have become extremely complex and significant in the future development in Beijing.

Therefore, we hope to actively use advanced theories and scientific analysis methods in the fields of landscape ecology network construction, city historical landscape cognition, greenway planning and construction, combining our research with actual situations, and then propose forward-looking and feasible plans of green space promotion and cultural landscape pattern reconstruction.



01 课题思考

STRATEGIC THOUGHT