

城市荒野： 夹缝中的自然与机遇

Urban Wilderness: Nature and the Potential in the Urban Cracks

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摘要

城市荒野是普遍存在于城市系统夹缝中的自然，可提供野生动植物生境及自然游憩地等，蕴藏着提升城市生态韧性的重要机遇。一方面，前所未有的城市化进程和公众的负面假设造成了城市荒野的不断缩减；另一方面，自然过程重新主导因工业衰退和城市收缩而产生的闲置土地，再野化理念与技术也逐步发展，突显了重建和激活城市荒野景观的巨大潜力。随着生态文明建设、“山—水—林—田—湖—草”命运共同体统筹协调，以及“基于自然的解决方案”在中国的不断推进，当前正是我们深入认知城市荒野、辨识其内涵与价值、构建认同并开展保护与修复实践的最佳时机。

关键词

城市荒野；生态机遇；生态文明；再野化；基于自然的解决方案

ABSTRACT

Urban wilderness is the remnant nature existing within the cracks of urban context, which can provide habitats for wildlife and natural recreation areas, with significance in optimizing urban ecological resilience. On the one hand, the unprecedented urbanization processes and the public's negative hypotheses on the concept have caused continuous reduction of urban wilderness; on the other hand, opportunities are seen in reconstructing and activating urban wilderness when natural processes return to dominate the idle lands resulting from industrial recession and urban shrinkage, and the rewilding concept and techniques develop gradually. With ecological civilization construction, the initiative of a systematic management of the mountains, waters, forests, farmlands, lakes, and grasslands, and the advance of adopting Nature-Based Solutions in China, it is the best time to acknowledge urban wilderness in depth, identify its connotations and values, construct identity recognition, and carry out practices of conservation and restoration.

KEYWORDS

Urban Wilderness; Ecological Opportunity; Ecological Civilization; Rewilding; Nature-Based Solutions

翻译 | 嵇扬、王颖、田乐

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过去数十年，城市的不断扩张导致了大量自然景观的丧失；同时，城市内部空间结构的变化造成了建筑密度的快速增加和土地利用集约化，使城市居民身边的自然空间不断收缩。长期缺乏自然体验导致的自然缺失症正成为一场不可忽视的社会危机，既威胁着人们的身心健康，也造成了人们对自然的敬畏心与保护意识的缺席^[1]。在日常生活中，城市绿地为居民提供了接触自然的唯一途径。然而，受限于过度的人工干扰和偏狭的审美意识，城市绿地往往植物种类贫乏且景观结构单一，既无法展现真正的自然野趣，也难以提供足够的生物多样性来有效维持生态系统服务，部分人工痕迹浓厚的城市绿地更是被批评为“绿色荒漠”^[2]。

如今，人们更加清晰地认识到，城市的可持续发展离不开基于自然的解决方案^[3]，即保护、修复和可持续管理自然资源，在适应社会变革与环境变化的同时提供人类福祉，特别是生物多样性的效益^[4]。事实上，人类的生态福祉根植于自然荒野，无论是关乎身心灵的全人健康，还是大气、水体与生物多样性的修复，都依赖于荒野^{[5]-[7]}。无论是当今中国生态文明建设强调的统筹“山—水—林—田—湖—草”系统治理，还是全球范围内“自然需要一半”（Nature Needs Half）等生态运动的兴起^[8]，都反映出人们对荒野不可替代价值的重视。

在高度人工化的城市中，依然残存着片段化的荒野景观。它们可能是被城市化吞没、但尚未开发的原生性荒野地，亦可是动植物种群自发迁入并自然演替而产生的次生荒野^[9]。以笔者生活的重庆主城为例，在坡、坎、崖、槽谷、沟壑、平坝中的孤立高地、长江河道里的孤立岛屿、老旧工厂、废弃铁路等寻常可见的城市夹缝场景中，大量分布着以自然过程为主导的城市荒野片段，具有弥足珍贵的生态价值：丰富多样的乡土植物恣意生长，蛙鸣虫叫不绝于耳，黑冠鹃隼（*Aviceda leuphotes*）和短耳鸮（*Asio flammeus*）等猛禽时常可见，可为居民提供无需远行就能体验的自然野性；为野生动植物提供了栖息地与迁徙踏脚石，增加了城市绿地网络的生态连通性，从而维持城市生态系统的整体健康^[10]；此外，有助于公众认识到人类与其他生物共享城市空间这一事实，开拓人们看待城市不同视角^[11]。

然而，说服人们接受城市荒野这一概念，并意识到其自然资源属性和蕴藏的生态价值，是一项艰巨的挑战。人们习惯于欣赏模式化的人工造景，往往漠视城市荒野中富有野性的生命活力，忽视它们的生态效益，甚至可能因为其“无序”的视觉感受而对其加以清理或改造。美国荒野保护先驱奥尔多·利奥波德就曾批判城市居民（尤其是管理者）对城市景观中荒野要素的负面假设，认为城市荒野的价值能够、也应当在任何城市林地、公园甚至私家花园中得到体现^[12]。而与此同时，我们正迎来重构城市荒野系统的机遇——无论是工业转型遗留下的棕地，还是因虚拟空间兴起和城市收缩而产生的闲置土地，亦或是退化的城市园林绿地，都具有再度转化成为城市荒野的潜力。此外，逐渐兴起的“再野化”（rewilding）理念鼓励减少人类活动干扰，借助自然力量修复生态系统和生态过程，从而增强城市景观的野性特征，提供了将“夹缝中的自然”转化为荒野斑块甚至复杂生境网络的可能。

时至今日，城市荒野的存在和价值依然存在争议。在本期中，我们为进一步厘清城市荒野的概念、内涵与价值而展开争鸣。万斯·G·马丁基于城市荒野与自然荒野的显著差别，提出将“城市荒野”概念表达为“城市野境”的学术思考；英戈·科瓦里克肯定了荒野片段在城市空间中的实际存在，并提出“古老”与“新生”两种主要城市荒野类型及分类标准。两位学者在城市荒野对于城市生态保护与绿色基础设施发展等方面的价值、机遇和挑战达成了共识。邵钰涵等人剖析了城市荒野概念的发展与演化，并对城市荒野价值认同的构建逻辑展开深入讨论，意图为城市居民和管理者发现、体验和可持续管理城市荒野提供科学依据。

本期亦汇集了一系列针对城市荒野保护、修复与管理的实践案例及相关思考。袁嘉等人基于主动利用景观生态流，模拟荒野植物群落结构、动态与过程，以及最小限度干预理念，提出城市植物景观再野化的技术框架，并结合重庆本土实践阐述了重建兼具生态调控和野态审美城市荒野景观的技术范式。沃尔特·科姆等人回顾了加拿大多伦多市汤米—汤普森公园在自然做功主导下，逐渐从建筑废料填埋场演变为自然保护区的历史过程，探讨了自然修复与设计干预之间的动态平衡，以及随时间推移而彼此和谐相融的理想状态与实现可能。托马斯·雷纳结合Phyto工作室在美国华盛顿特区的实践经验，介绍了拟自然植物群落设计的具体途径，提供了“后荒野”时代进行生态种植、突破当前人工植栽功能局限的积极策略。尹豪等人关注城市闲置地中自生植物所提供的生态自我修复机遇，基于实地观测，分析了闲置地自生植被的时空特征、植物群落特征及其环境因子和种源条件等。郭陶然等人结合上海乡土生态科普示范基地项目，从乡土生物引种、生物群落构建及后期效益评估等角度，记录了以生物多样性提升为目标的城市荒野生境营建实践过程。张子豪等人则探讨了将人工智能应用于解译和营建野地的可能性与理论框架，试图为利用全新景观策略培育新型野地提供一种发展技术多样性的潜在路径。

充分发挥城市荒野所提供的自然补偿功能，对实现城市韧性与优化城市系统的“自然—人工”二元驱动结构具有关键意义。希望本期内容能为广大国土空间规划、景观设计与生态领域从业者及相关决策制定者提供认识城市荒野的多元视角，共同探索城市荒野保护修复理论与技术，让城市重归文明与野性相融的乐土。LAF

In the past decades, the continuing urban sprawl leads to the huge loss of natural landscapes. Worse, the already limited natural spaces for citizens are undergoing shrinkage due to the rapid increase of building density and intensive land use brought about by the changes of the city's spatial structure. The long-term lack of opportunities for nature experience leads to the nature-deficit disorder, a non-negligible social crisis, not only threatening people's physical and mental health, but also resulting in the absence of veneration or conservation awareness of nature^[11]. Nowadays, citizens' urgent need of urban green spaces for connecting with nature is hardly met due to the poor plant richness and homogeneous landscape structures. Excessive human interventions and the public's negative aesthetic awareness undermine the values of urban wilderness, decrease urban biodiversity that is vital to sustaining ecosystem services, and aggravate the creation of urban green spaces that require high maintenance as "green deserts"^[12].

By now, an unparalleled emphasis has been put on Nature-Based Solutions^[3] in keeping the sustainable development of cities, i.e. conserving, restoring, and sustainably managing natural resources to attune to

social and environmental changes and guarantee human well-beings, especially the biodiversity benefits^[4]. The natural wilderness is exactly where the ecological benefits rooted, supporting the holistic health of humans, the improvement of air and water quality, and the restoration of biodiversity^{[5]-[7]}. Nowadays no matter at home or abroad—such as the initiative of the sustainable management of territorial ecosystems of mountains, rivers, forests, farmlands, lakes, and grasslands emphasized in China’s ecological civilization construction, and the rise of ecological movements like “Nature Needs Half” worldwide^[8]—people begin to recognize the irreplaceable values of wilderness.

In highly artificialized cities, fragments of wilderness exist as well, including the undeveloped original wilderness encompassed by urbanization, and the secondary wilderness shaped by the spontaneous migration of wildlife and succession in natural communities^[9]. In the center of Chongqing, for instance, these urban wilderness fragments based on a robust self-regulation of ecosystem processes are ubiquitously seen in the cracks in the city, from slopes, banks, cliffs, trough valleys, ravines to isolated highlands in intermountain basin, isolated islands in the river course, derelict factories, and abandoned railways. They are of rich ecological values: various native plants grow wildly with singing frogs and insects, and raptors such as *Aviceda leuphotes* and *Asio flammeus* are commonly observed, providing citizens with opportunities embracing nature without a long journey. Serving as the habitats and stepping stones for wildlife migration, wilderness fragments can also enhance the ecological connectivity of urban green networks to maintain a holistic health of urban ecosystems^[10]. Furthermore, the wilderness fosters citizens’ awareness that they are sharing urban spaces with other creatures, inspiring them to consider the city from a new perspective^[11].

However, it remains a challenge to enhance the public’s acceptance to urban wilderness and recognition of its core ecological values as natural resources. Ubiquitous man-made formal landscapes have overshadowed the wild vitality and ecological benefits of urban wilderness, for which the latter might be eliminated or transformed due to their disorder in appearance. Aldo Leopold, the American pioneer in wilderness preservation, criticized the negative hypotheses on wilderness by urban residents (especially the administrators), holding that the values of urban wilderness could and should be embodied in every urban forest, park or private garden^[12]. Fortunately, opportunities are seen in reconstructing the urban wilderness system—leftover brownfields, idle lands due to advance of virtual space technology or urban shrinkage, and degraded urban green spaces all have the potential to be restored towards urban wilderness. In addition, the gradually accepted concept of rewilding encourages replacing human interventions with the natural restoration of ecosystems and ecological processes to strengthen the wildness of urban landscapes, illustrating the feasibility to transform “nature in the urban cracks” into wilderness patches or even more complex habitat networks.

Today, controversies over the existence and values of urban wilderness continue. This issue gathers scholars’ insights that contribute to the understanding of the concept, connotation, and values of urban wilderness. Vance G. Martin presented a rationale for using the term of “urban wildness” to replace “urban wilderness” based on the significant differences between urban wilderness and natural wildness. Ingo Kowarik highlighted the existence of wilderness fragments in urban spaces and categorizes urban wilderness into “ancient wilderness” and “novel wilderness.” Martin and Kowarik reached a consensus on the values, opportunities, and challenges of urban wilderness in practices of urban ecological conservation and green infrastructure development. Shao Yuhan et al. analyzed the conceptual development and evolution of urban wilderness and propose a value recognition framework, providing scientific guidelines for urban residents and governors to discover, experience, and sustainably manage urban wilderness.

This issue also presents a series of practical cases and thoughts on the conservation, restoration, and management of urban wilderness. Yuan Jia et al. established a technical framework of urban vegetation rewilding by leveraging ecological flows, stimulating natural plant communities, and designing with minimum human interventions. With a case study in Chongqing, they amplified the key procedure of rebuilding urban wilderness on both ecological and aesthetic values. Reviewing the history of the Tommy Thompson Park in Toronto, Canada which spontaneously evolved from rubble into a natural refuge, Walter Kehm et al. probed into the dynamic balance and harmony between natural restoration and design interventions over time. Thomas Rainer shared the practical experience of Phyto Studio in Washington D.C., the USA and the approaches to quasi-natural plant community design, providing feasible strategies for ecological planting in the “post-wilderness” era, offering an alternative to current planting design. Yin Hao et al. focused on opportunities for ecological self-restoration provided by spontaneous plants in urban idle lands, analyzed the characteristics in its early stage, the growth of plant communities and related environmental factors, and inventoried the potential seed sources of the site. In the project of Shanghai Urban Biodiversity Education Base, Guo Taoran et al. expounded the design process of urban wilderness establishment that improves local biodiversity through native species introduction, community construction, ecological benefit assessment, etc. Zhang Zihao et al. explored the potential and theoretical framework to apply Artificial Intelligence in interpreting and constructing wilderness, providing new opportunities for landscape strategies to cultivate new forms of wild places via technodiversity.

The natural compensation function of urban wilderness is significant to sustain urban resilience and optimize the natural–constructed ecosystem in the city. This issue hopes to provide multiple perspectives for practitioners and decision makers in territorial spatial planning, landscape architecture, and ecology. By collecting the latest theoretical and technical efforts in urban wilderness conservation and restoration, this issue is expected to inspire thoughts that make cities the Promised Land integrating with civilization and wildness. **LAF**

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