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1.3.4 Genesis of urban soils and soil functions in urban ecosystems; 1.3.5 Urban soil landscapes; 1.3.6 Balancing the soil substance budget in settlements
1.3.7 Classification of soils in settlements1.3.8 Urban soil protection concepts; 1.4 Hydrology of Urban Environments; 1.4.1 Introduction; 1.4.2 Urban water cycle; 1.4.3 Hydrological processes in urban areas; 1.4.4 Water balance characteristics of urban areas; Summary; Section 2-Ecology in Cities: Patterns of Urban Biodiversity; Introduction; 2.1 Plant Communities of Urban Wetlands: Patterns and Controlling Processes; 2.1.1 Introduction; 2.1.2 Wetland plant biodiversity in urban areas; 2.1.3 Effects of urbanization on wetland vegetation; 2.1.4 Synthesis and prospective view
2.2 Potemkin Gardens: Biodiversity in Small Designed Landscapes2.2.1 Introduction; 2.2.2 Species diversity; 2.2.3 Structural biodiversity; 2.2.4 Design; 2.2.5 Conclusion; 2.3 Vegetation of Urban Hard Surfaces; 2.3.1 Introduction; 2.3.2 Hard surface types; 2.3.3 Biota; 2.3.4 Colonization and dynamics; 2.3.5 Origin of hard surface floras; 2.3.6 Theoretical frameworks; 2.3.7 Problems caused by vegetation on hard surfaces; 2.3.8 Benefits of hard surface vegetation; 2.4 Composition and Diversity of Urban Vegetation; 2.4.1 Introduction; 2.4.2 Urban floristics 2.4.3 Does size matter? Cities and vegetation patches as habitat islands2.4.4 The planted cityscape; 2.4.5 Ecology of remnant vegetation in urban areas; 2.4.6 Drivers of biodiversity and change in urban vegetation; 2.4.7 Looking ahead; 2.5 Anthropogenic Ecosystems: The Influence of People on Urban Wildlife Populations; 2.5.1 Introduction; 2.5.2 Definitions of 'urban' on a global scale; 2.5.3 Humans as a keystone species; 2.5.4 Assemblages of urban vertebrates worldwide; 2.5.5 Similarities and differences in urban vertebrate assemblages; 2.5.6 Managing wildlife in anthropogenic ecosystems 2.5.7 Required adaptations to exist and thrive in urban ecosystems

Sommario/riassunto

Urbanization is a global phenomenon that is increasingly challenging human society. It is therefore crucially important to ensure that the relentless expansion of cities and towns proceeds sustainably. Urban ecology, the interdisciplinary study of ecological patterns and processes in towns and cities, is a rapidly developing field that can provide a scientific basis for the informed decision-making and planning needed to create both viable and sustainable cities. Urban Ecology brings together an international team of leading scientists to discuss our current understanding of all aspects of urb