

- *Urban flora – Introduction and naturalisation of plants – Cultural history – Berlin*

**Herbert Sukopp (Berlin)**

## **Flora and Vegetation Reflecting the Urban History of Berlin**

*Flora und Vegetation als Spiegel der Stadtgeschichte Berlins*

With 3 Figures, 3 Tables and 5 Photos

The word “urban ecology”, in German “*Stadtökologie*”, is used in two different ways. In the normative usage, it describes urban design programmes at the political and planning level. Within the natural sciences, however, urban ecology is used to refer to that area of biology which is concerned with urban areas. “Ecology” is understood here as the science of the relationships amongst organisms and biotic communities as well as their relationship to their environment. Urban ecology as a natural science is a young discipline. For a long time, it was thought that urban areas were not worth studying with regard to ecology. Cities were seen as anti-life. It was assumed that few plants or animals could survive in an urban setting. This view began to change over 30 years ago. Since then, ecological aspects of cities have been intensively researched. Early studies of ecology in cities shared the astonished realisation that environments created by humans provide habitats for characteristic species and that these species reoccur under similar conditions. Analyses have shown that urban areas include a wide variety of habitats, organisms and communities. The variety of species found in urban areas often exceeds that in the urban hinterland. A very good case for this phenomenon is provided by the city of Berlin.

*Summary: Flora and Vegetation Reflecting the Urban History of Berlin*

The composition and the changes of the flora and the vegetation have proven to be reflections of the economic and cultural history of Berlin. The evolution of the ruderal flora essentially runs parallel to the size and the intensity of trade and industry and forms a good indicator for the state of the technical culture. To understand the plant-environment relationship it is necessary to see the present habitats as a result of the historical evolution. Urban bioco-

enoses are extreme examples of communities produced by successive invasions and not by co-evolution. Generally, the historic uniqueness of urban situations, i.e. the combinations of environmental factors and organisms, differentiates urban ecosystems from most natural ones, even those subject to strong natural disturbance. Understanding human behaviour in relation to plant dispersal is as important as understanding the biology of the plant species, as it contributes essentially to the individuality of metropolitan Berlin, including through changing fashions in horticulture.

*Zusammenfassung: Flora und Vegetation als Spiegel der Stadtgeschichte Berlins*

Die Veränderungen von Flora und Vegetation spiegeln die Wirtschafts- und Kulturgeschichte Berlins wider. Die Entwicklung der siedlungsbegleitenden Ruderalflora verläuft parallel zu Umfang und Intensität von Handel, Gewerbe und Industrie und ist ein Gradmesser der Zivilisation. Zum Verständnis des Verhältnisses von Umwelt und Pflanzen ist es notwendig, die gegenwärtigen Lebensräume als Ergebnis der historischen Entwicklung zu sehen. Städtische Lebensgemeinschaften entstehen fortwährend durch Einbürgerungen neuer Arten ohne lange Koevolution ihrer Bestandteile. Die historische Einmaligkeit einer Großstadt in Standorten und Organismenbestand unterscheidet urbane Ökosysteme von natürlichen, selbst denen mit starken natürlichen Störungen. Zur Individualität der Großstadt Berlin tragen menschliche Verhaltensweisen – auch durch wechselnde Moden im Gartenbau – wesentlich bei.

*Résumé: Flore et végétation, miroirs de l'histoire de Berlin*

L'évolution de la flore et de la végétation reflète l'histoire de l'économie et de la civilisation berlinoises. La flore rudérale évolue avec le processus d'urbanisation et parallèlement au volume et à l'intensité du commerce et des activités industrielles et permet ainsi de mesurer les effets civilisateurs. Afin d'apprécier les rapports entre l'environnement et les espèces végétales, il est indispensable de considérer les habitats d'aujourd'hui comme le résultat de leur évolution historique. Les biocoenoses urbaines se créent continuellement à travers de nouvelles espèces apparaissant sans que pour autant leurs composants n'accusent une co-évolution prolongée. L'unicité historique d'une grande ville quant aux sites et à l'inventaire des organismes différencie les écosystèmes urbains de leurs homologues naturels même lorsque ces derniers sont affectés par d'importantes perturbations d'origine naturelle. Les comportements humains et parmi eux les modes changeantes de l'horticulture contribuent à l'individualité de la métropole berlinoise.

*Prof. em. Dr. Dr. h.c. Herbert Sukopp, Rüdeshheimer Platz 10, 14197 Berlin, Germany, herbert.sukopp@tu-berlin.de*