The Invention of the Ruderal Area.
Urban Ecology and the Struggle for Wasteland Protection in West-Berlin

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Jens Lachmund

Maastricht University

Probably no other city of a comparable size has been as thoroughly scrutinized for its urban wildlife as the walled city of West-Berlin. Whereas field ecologists elsewhere focused mainly on communities and ecosystems that were located in the countryside, in allegedly natural landscapes of other continents or in marine environments, ecologists in West-Berlin turned to their own city as their primary research object and practical fieldwork site. From the 1960s onwards, the vegetation ecologist Herbert Sukopp, and a growing number of collaborators, made Berlin one of the emblematic cases of the newly emerging specialty of urban ecology. They monitored the development of the city's flora and fauna and explored how the latter were effected by the specific conditions of the urban environment. Rather than being a purely academic endeavor, this urban ecology also had a clear political mission: ecology was supposed to monitor the detrimental effects of urbanization on urban wildlife, and thereby, to create a base for a more rational planning of future cities.

It was in particular with regard to urban wastelands such as rubble areas and abandoned railway tracks that these knowledges and policies took shape. From WWII onwards these spaces had already been the primary fieldwork sites on which ecologists studied the development of urban flora and fauna. Drawing upon this fieldwork, ecologists and activist groups claimed that urban wastelands were valuable "ruderal areas" or "biotopes" which displayed a high amount of species diversity, and accordingly, called for preserving them. In Berlin, eventually two of these areas where turned into so-called nature parks.

In this paper I want to use the example of urban wastelands to shed light on the role of place in the production and institutionalization of scientific environmental

knowledge.[1] Scholarship of environmental history and sociology often tends to view science as an objective and more or less universal resource that allows actors to grasp the nature of environmental problems and to solve them in a more rational way. Places in such analysis thus figure primarily as the passive object or target domain to which such knowledge is applied. Constructivist or cultural approaches in environmental studies have often criticized the realist assumptions of this view and argued that environmental knowledge is the outcome of discourses, definitional processes or broader patters of cultural perception. Again, however, environmental spaces and places are merely seen as passive target objects to which such definitions are attributed. In this paper I want to demonstrate how our understanding of the construction of environmental problems can benefit from a more thorough and systematic analysis of the spatialities in which these problems are embedded. To a large extent, I draw upon a notion of science as local practice as it has been developed in various strands of recent history and sociology of science.

Drawing upon these considerations, I view urban wastelands not just as preexisting objects, nor just as passive containers of ecological fieldwork practices. The wasteland was a locale which interacted in multiple and mutually constitutive ways with the epistemic and political practices that were situated within or around it. First, it acted as an intermediary space in which new forms of ecological expertise and urban policy were co-produced (Jasanoff 2003). A clear-cut boundary between science and other forms of knowing and acting on behalf of the sites never existed

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[1] This paper is adapted from several prior publications: Lachmund, J. (2013). Greening Berlin. The Co-production of Science, Politics, and Urban Nature. Boston/Mass., MIT Press. Lachmund, J. Knowing the Urban Wasteland. Earthly Politics. Local and Global in Environmental Governance. S. Jasanoff and M. Long Martello. Boston, Mass., MIT Press**:** 241-262, Lachmund, J. (2011). Greening the City. Urban Landscapes in the Twenieth Century. D. Brantz and S. Dümpelmann. Charlottesville, Virginia University Press**:** 204-228.

during this process. On the one hand, ecological knowledge formed part of the very definition of the site as a "ruderal area" and it materialized in new forms of ordering this space. On the other, it was also a local setting in which issues of urban politics and nature conservation were translated into research practices and in which new kinds of knowledge of the city's flora and fauna were produced which, in turn, informed the discourses and practices of governing these spaces.

I will trace the local discursive and political trajectory of the "ruderal biotope" in West-Berlin through three phases: (1) the invention of the category in the fieldwork of ecologists as has developed from the 1950s; (2) the political campaigns of ecologists and other urban actors for the protection of these areas (since the late 1970s); and (3) the negotiation of a new regime of order for these places.

Ecological fieldwork and the making of the ruderal area

So-called "ruderal sites", a term which is based on the Latin word for rubble *(rudus)*, had been studied by botanists interested in the composition of local flora and the invasion of "alien" plants since the 19th century. Typically, they were found on farms, along streets, or railway tracks. What was new after 1945, however, was the transformation of whole cityscapes into large fields of rubble. Issues such as the spread of new plant species or of vegetation composition could thus be studied on a new scale and in an environment that differed considerably from previously known places. Whereas in other cities rubble areas were quickly redeveloped in the 1960s, it was the effect of the politically and economically marginal situation of West-Berlin that meant they were developed here at a much slower pace. Notably, until the early 1980s, the Northern part of the Kreuzberg district and the adjacent former Diplomatenviertel remained as vast landscapes of rubble. Moreover, in abandoned

railway areas further wastelands existed that attracted ecologists' interest in the late 1970s.

At least partly, the turn of West-Berlin's ecology to the city can be explained by the geopolitical situation. Due to the deprivation from its hinterland, many field ecologists tended to concentrate on their own city when doing practical fieldwork. A central role was thereby played by Sukopp who, in 1969, became a professor at the Technical University where he subsequently established (together with two other professors) a distinct department for ecology in 1972/73. Beginning with his 1958 dissertation thesis (a study of the fens within the Berlin Grunewald), Sukopp's research had been nearly exclusively devoted to West-Berlin. His positions as a professor and not only enabled him to continue his research on the Berlin flora and to formulate a more systematic approach to the study of urban nature but also to act as a political entrepreneur; creating networks between scientists, organizing material and institutional resources and making claims on policy and planning issues. Within a few years Sukopp, along with a growing number of students and assistant professors who worked with him, had become the most renowned representatives of German urban ecology.

It was the goal of these studies to characterize the vegetation and to make sense of the direction in which it would further develop, i.e. so-called succession. Ecologists considered the vegetation of these sites as a special type, the 'ruderal vegetation' and the wastelands themselves were later called 'ruderal areas' or 'ruderal biotopes'. As Scholz (Scholz 1956) had stated in his thesis in 1956, it was characterized by the abundance of neophytes, often of Southern origin, that benefited from the environmental conditions of the city, especially the warmer climate. In the

following years, Sukopp and his co-workers developed a detailed scheme of the series of plant communities through which the succession developed at these rubble sites (Sukopp 1971).

Studying wastelands involved, at least temporarily, the social and material appropriation of these spaces as sites of knowledge production. Ecologist visited the sites, assembled data, usually by taking notes on paper or in a field notebook. Gathering data also involved picking out herbaria specimen or hunting animal. More systematic surveys of the vegetation were done on sample sites that were delineated on the ground. From time to time, ecologists also drew maps of the site's vegetation structure or of the distribution of animal species. These practices of site visiting configured the wasteland as an observational space, highlighting certain epistemically relevant features at the expense of others. The visits were carefully scheduled according to the seasonal or the daily life cycles of plants and animals. The paths of the visitors around the site connected certain points of interest. Observation work on the area also included small modifications of its material landscape, such as placing traps for catching insects or delineating sample sites for vegetation surveys with plugs.

Through the practice of site visiting, wastelands became a node within the network of routine paths of local botanists (amateurs and scientists alike) creating meanings of place as well as subjectivities that thrive on these meanings. Individual ecologists developed an almost intimate relationship with the place, both in terms of their detailed knowledge as well as emotional commitment. The practice of visiting created a local community of people in which data was exchanged and a common experience and commitment was shared. The sites also brought together people from different specialties such as botanists, vegetation scientist or experts of certain groups

of animals. There also existed collective forms of site visits, either by two or three people or in the form of organized excursions. These excursions allowed the participants to exchange observatory skills and knowledge and to cooperatively elaborate their practices of observation and related taxonomies of species, vegetation, and ecosystem-types.

What kind of space was performed in the context of these practices and the circuits of observation that they sustained? Most people tended to see wastelands as eyesores. Although located in the city, they were "spaces at the margin" (Shields 1991), which were used for shadow activities that otherwise did not find a place in the city. With their surveys, however, ecologists reframed these sites as a new spatial entity, as *ruderal areas* or *ruderal vegetation*. Among their features was a high species diversity as well as the occurrence of specific forms of flora and vegetation. Ecologists cited characteristics of the soil and the climate of the city to explain the specific composition of plants. Moreover, increasing railway traffic was mentioned as a reason for the spread of foreign seeds to Berlin. For ecologists, wastelands were the prototype of an urban ecosystem: their marginality within the urban environment allowed nature to thrive almost unimpeded at these sites; and yet they were determined by the specific environmental conditions of the city (Kowarik 1991).

Wasteland conservation: The politics of an ecological category

Ecologists did not only appropriate wastelands as sites of knowledge production. From the 1980s onwards, they also called for the protection of ruderal areas as urban nature parks. These calls for wasteland preservation found much resonance in citizen activist groups who opposed civil construction projects that were planned on these

sites. *Bürgerinitiativen* (literally citizens' initiatives) launched campaigns, lobbied local politicians and initiated lawsuits against public authorities. The protest for wasteland preservation included fanciful forms of action. For example, activists of the *Bürgerinitiative Südgelände* dressed-up as plants and animals when they invaded the office of the Berlin civil construction administration to voice their concern about the wildlife that would be lost if the city's plan for a new freight station at that site was realized. In 1988, left-wing activists even squatted a small wasteland next to the wall that was just traded in by West-Berlin from the GDR. The activists established a camp on the site in order to protest against the West-Berlin government, which was about to sacrifice this allegedly valuable ruderal biotope for the construction of a new highway. The call for wasteland preservation also found supporters within the Berlin parliament. Notably, the faction of the Alternative Liste submitted various requests to protect the wastelands of West-Berlin's 'central area'.

As a result of both ecologists' lobbying as well as mounting public protest, a number of Berlin's ruderal areas were actually turned into protected areas. In 1982, after a small grove of Black Locust had developed in a bombed plot in the district of Kreuzberg, the area was designated as a "ruderal vegetation park" (Schaumann 1984). Although ecologists could not prevent the construction of a new museum for technology at the fringe of the so-called Gleisdreieck (an abandoned railway area), a considerable part of the adjacent vegetation was turned into a *Naturdenkmal* (nature monument). One of the most successful projects of wasteland preservation, a nature park at the Südgelände (another abandoned railway area), was only finished in 2001. After the unification of the city, Berlin ecologists and activists extended their claims on the various wastelands that existed in the former East of the city. In one case, a

former airport in Berlin-Adlershof *(Flugplatz Johannisthal)* also led to the designation of a large ruderal area as a landscape park.

Not always, however, were ecologists that successful. All too often, calls for wastelands preservation clashed with powerful land-use interests and could therefore not or only partly be realized. This became clear in 1986, when a hotel was built at the so-called Dörnbergdreieck, a rubble area in the district of Tiergarten – a place that ecologists considered as one of their most important fieldwork sites. Even the joined opposition of academic ecologists, nature conservation officials and neighborhood activists could not keep the Senate from admitting the investor's plan to build the hotel. Some of these conflicts lingered until way beyond the fall of the wall, and were only settled within the recent decade. The unification and the subsequent rebuilding of the capital made the claims for ambitious wasteland protection schemes even less realistic. Many wastelands of former West-Berlin, as well as those that ecologists hoped to protect in the East, were eventually developed. In this sense, the Südgelände and the Johannisthal airports remained as the two outstanding exemptions. Among the 'lost' wastelands was even the large area around the Gleisdreieck that, in the 1980s, had attracted attention of ecologists and landscape planners even from outside of Germany. In the early 1990s, large parts of the area were used as a logistics center for the construction work at the adjacent Potsdamer Platz. After an intricate debate about financial compensation which was supossed to be provided by the developers of the Potsdamer Platz, a considerable part of the area was turned into an aesthetically shaped urban park. With the exemption of a small and protected Black Locust grove, however, the vast spontaneous vegetation that once covered this site has now disappeared.

From protection to design

The more the wasteland came to be framed as a "ruderal area" and urban planning decisions considered its value as "nature", the social use and material form of these areas emerged as new issues of public contestation. Instead of being just left on its own, the wasteland became itself reconstituted as the target of competing modes of socio-material ordering. I will focus on the Südgelände to briefly sketch two main issues that figured in this context.

The first theme concerned the extent to which the area should primarily be organized as a reserve for the protection of plant and animals species, or alternatively should be shaped as a more formal park. The notion of a nature park can be seen as a compromise between these two concepts. Initially, the plasticity and comprehensiveness of this concept served to create alliances between groups of actors who tended to prioritize either of these two aspects. However, during the process of planning and designing the park, the tensions inherent in this concept became evident.

From 1991 onwards, the design process was organized by *Grün Berlin* - a quango responsible for green planning in Berlin. Design plans were elaborated by two landscape planning offices which maintained close relationships, both personally as well as intellectually, to scientific urban ecology (ÖkoCon 1991)Grün Berlin, 1995). They called for a relatively restrictive policy with respect to public access, and had strong reservations against any artful design. However, when the landscape planners

presented their conception, it met harsh resistance from *Grün Berlin* as well as from the local activist group at the Südgelände. The *Allianz Umweltstiftung*, which provided financial support for the project, also became a strong opponent of such restrictions. These issues were debated by a consulting panel in which the different groups were represented. Although the participants agreed that the existing features of flora and fauna should be protected and be made the major theme of the park, design plans showed a constant move from a relatively rigid conservation scheme toward a park that was more accessible to the public and, at least partly, artistically designed.

According to the original plan, the meadows in the center of the area were to be turned into a nature reserve and fenced off to the public. Only a small viewing platform at the fringe of the site would have allowed visitors to visually access the area. A revised plan, which was presented in 1995, included a wooden foot-bridge for visitors (Grün Berlin 1995). The trail that was eventually constructed, moved the project a considerable step further toward landscape art. A group of metal sculpture artists, who had their workshop in an old railway shed on the fringe of the Südgelände, proposed an alternative design for the pathway. This "walk-able sculpture" *(begehbare Skulptur)* was made of rusty steel and consisted of a narrow path that rested on low metal rolls. At some point, further sculptures (also made out of rusty steel) were added along the track. The rusty material and the wheel-like shape of the rolls were an explicit allusion to the history of the site as a railway station. The track allowed people to walk into the center of the nature reserve without having any physical contact with the soil and vegetation even though they worked close to the ground and were not restricted by a railing. More than being just a pathway system, this sculpture turned the Südgelände into an artsy place. Nature and art became closely connected to each other, one providing the background for the other.

As these debates show, ecological framings of the site and the attempt to aesthetically design a park existed in a relatively uneasy relationship with each other. However, aesthetic design was not intrinsically at odds with ecology. Negotiation between ecologists and conservationists, on the one hand, and designers, on the other, resulted in mutual alignments between these perspectives that most of the participants were willing to accept.

A second issue of order emerged when landscape planning consultants proposed an ecological management scheme for the site. In the early 1990s, a survey established that the woody vegetation had increased dramatically. Accordingly, it would not have taken much time until a wood would have covered the entire area. Ecologists maintained that this would have seriously diminished the quality of the site because many of the rare species depended upon the existence of meadows. Accordingly, action was to be taken in order to avoid the further development of the woodlands. In order to prevent the expansion of the woodland, various trees that had spread in the meadows were cut. Park management also included the mowing of smaller plots, in order to preserve them in the state of early succession. Furthermore, single plants were removed when they tended to abound in the meadows and were supposed to make them more homogenous.

For ecologists, management was an ambivalent issue. On the one hand, they were expert advisors for park management and, in this position embraced the turn to management. What, in the first instance, had made the site so interesting for ecologists however, was just that it allowed the tracing of the spontaneous development of flora and fauna in the urban environment over time. In that respect, ecologists had an interest in keeping the sites free from any management intervention. This conflict was settled by the division of the park into different areas: areas in the

wood of robinia in which succession is still allowed to proceed spontaneously, and the open meadows, in which a quite rigid conservation scheme applies.

Some conservation activists and administration officials deemed the very idea of management as an illegitimate intervention in what they saw as a natural process. Gardeners who cut trees or mowed meadows in a nature reserve also aroused the suspicion of park visitors. The definition of maintenance schemes was further complicated by the diversity of goals that coexisted within the management agenda. What was deemed to be an intervention on behalf of plants and vegetation types often was criticized for its detrimental effects to other plants or to the fauna.

Conclusion

The story of West-Berlin's wastelands is a good example for the place-based nature of a field science (Henke 2000, Kohler 2002, Gieryn 2006). I have tried to shed light on the continuous enactment of the place in the temporal unfolding of fieldwork. In all three phases, fieldwork proceeded by means of a mutually constitutive interaction between scientists' activities and the social and material features of the site. Ecologists and the amateur naturalist who cooperated with them were urban space pioneers, who appropriated marginal spaces and constructed a new framing of their biophysical qualities and their functioning in the urban context. The campaign for preserving wastelands translated ecologists' categories and commitments into a broader public concern. Finally, the quest for design and management led to a recursive adaptation of the material design of the space to the contested precepts that guided its preservation. It was in the course of the continuous articulation of these diverse practices and discourses that the ruderal area as a new urban-spatial category was created, institutionalized and transformed.

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