

Restoration Ecologists Head to the City: Will It Open the Door for Us?

Steven N. Handel

These past few years of sickness and isolation have changed so much of modern life. Many people work from home, alone, with their companionship often just two-dimensional images on a flat screen. However, the fear of infection has caused more than a switch from going to work to working at home. In our cities, the changes are many and the responses of urban planners may include a landscape revolution. Is there room for restoration ecology in this revolution? And who among our community is willing to go from quiet country projects to become revolutionaries in the mean city streets?

Although eight of ten Americans now live in cities, the change in work life has led to quieter streets and less bustle in our city centers. It's been written that as our homes become workplaces, our offices may become homes to lessen the housing crisis in cities. Retrofitting commercial buildings into residences is difficult but possible (Badger and Buchanan 2023). We have seen sidewalks with less foot traffic become restaurants, and roads once defined by traffic jams slowly become safe routes for pedestrians and bicyclists. The reduced need for parking means that there are new lanes for alternative uses; may that include green corridors that can add a new richness of diversity to the now quieter streets?

The city of the future is being rapidly planned to reflect the economic and social realities of a new time. Restoration ecologists have concentrated their work in the quieter parts of the landscape, but our city centers present enormous opportunities for ecological advancement and biodiversity improvement. There are rich discussions and lively new communities of ecologists turning their eyes toward cities (see, for example the website for organizations like *The Nature of Cities*, and *Local Governments for Sustainability*).

The low hanging fruits of this transformation are fascinating. When streets become pedestrianized: Add bioswales and allées of trees and shrubs with rain gardens, together building narrow living corridors among existing

city parks and preserves. This builds a spider web of green spaces that can harbor vertebrates and invertebrates, even spiders themselves! There is a surprisingly rich biodiversity in cities now. The non-traffic streets can secure biodiversity, allow movement creating a wider population structure and give refuge when one sector of the city gets disturbed or rezoned.

When commercial buildings become residential towers: Suddenly, there's people around, 'round the clock. The streets are front yards, not passageways. Local roads get redefined as social spaces, playgrounds, urban gardens, sound buffers against the din of the streets which are still being used for transport. The *Nature Future Framework* (Hamel 2023) outlines ecological structures as for culture (being one with nature), for society (ecoservice benefits), and for nature itself (intrinsic value). Urban natural plantings play a role in all these new functions as well as building new links for a greenway of a now transformed city. On residential streets with schools, the greenways can act as outdoor STEM education classrooms, but also as the sites where the humanities, poetry, drawing, and photography all can be inspired. As residents slow down and look, they can learn, and a new generation of citizen scientists emerges who sees restoration of ecological structure of cities as normal.

When sidewalks become cafes or restaurant tables: New room for planters and borders of wildflowers and short shrubs, adding modest foraging for insects and small birds. These habitat clusters also muffle sound and create smaller, intimate dinner spaces, making the outdoor eating experience more pleasant. The ecoservice here is a perk for the restaurant owner, as indirect economic benefit.

It will not be easy to change the endless hardscape of major cities into a mosaic of green and gray surfaces. Rules and administrative habits of the past are slow to change even as this urban revolution unfolds. Restoration science can add its perspective in the city of the future, if the urban planners and city officials will let us in "the room where it happens."

We must solicit new partners in our work, professionals from engineering, architecture, landscape architecture, and urbanist communities. They are intensely trained, but not in the natural sciences. Without these new partnerships,

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an end to the silos that define so many professional roles, the new urbanism will have its economic successes and lovely designed venues but will be as ecologically dumb as in the past. Urban centers will be aesthetically beautiful but missing an understanding of the many services that ecology can give to the increasing residents of our future cities. We don't have to drop the trowel from our hand, but we had better grab a subway card in the other to get out to meet some new urban partners.

Recommended Reading

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