

The Natural History of an Urban Vacant Lot: Tannehill Wild Urban Woodland

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Natural History of Vacant Lots

Matthew F. Vessel and
Herbert H. Wong

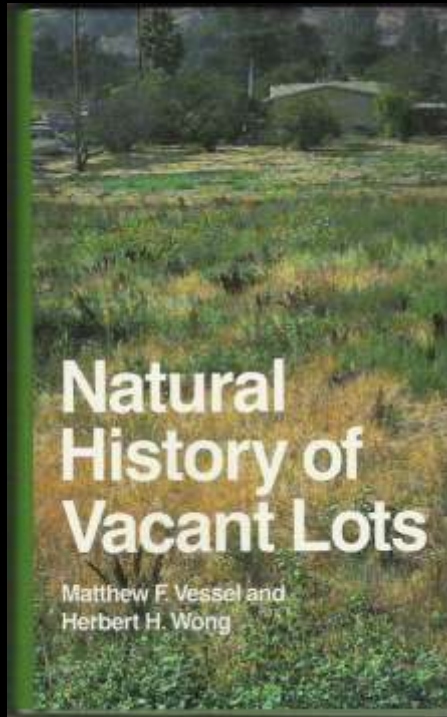


Natural History

Understanding whole organisms in context

Scientific - Ecological understanding shaped by cultural contexts

Literary - Cultural understanding shaped by ecological contexts



"The idea of nature contains, though often unnoticed, an extraordinary amount of human history."

Raymond Williams, "Ideas of Nature"

Sanctioned and Unsanctioned Nature

In the United States, the foundational metaphors of Nature that we celebrate are wilderness and pastoral arcadia.

They are the basis from which we assess the value of nature in America.

However, we are now predominately a country of urbanites who have only occasional contact with wilderness or pastoral nature.



Our understanding of what constitutes “sanctioned” urban nature in cities is shaped by culturally dominant metaphors of nature.

These metaphors valorize urban nature that is either deliberately cultivated in parks and gardens or formally protected as remnants of native landscapes obliterated by the creation of the city in preserves, sanctuaries, and refuges.



Environmental Perception of Nature and the City

The Sacred and the Mundane

Wilderness and the City

Natural vs. Artificial

Pristine vs. Degraded

Native vs. Non-native

Invasive
Non-native
Species



Once a rock
dove, now
the winged
rat of the city

Non-native species
and Biodiversity?

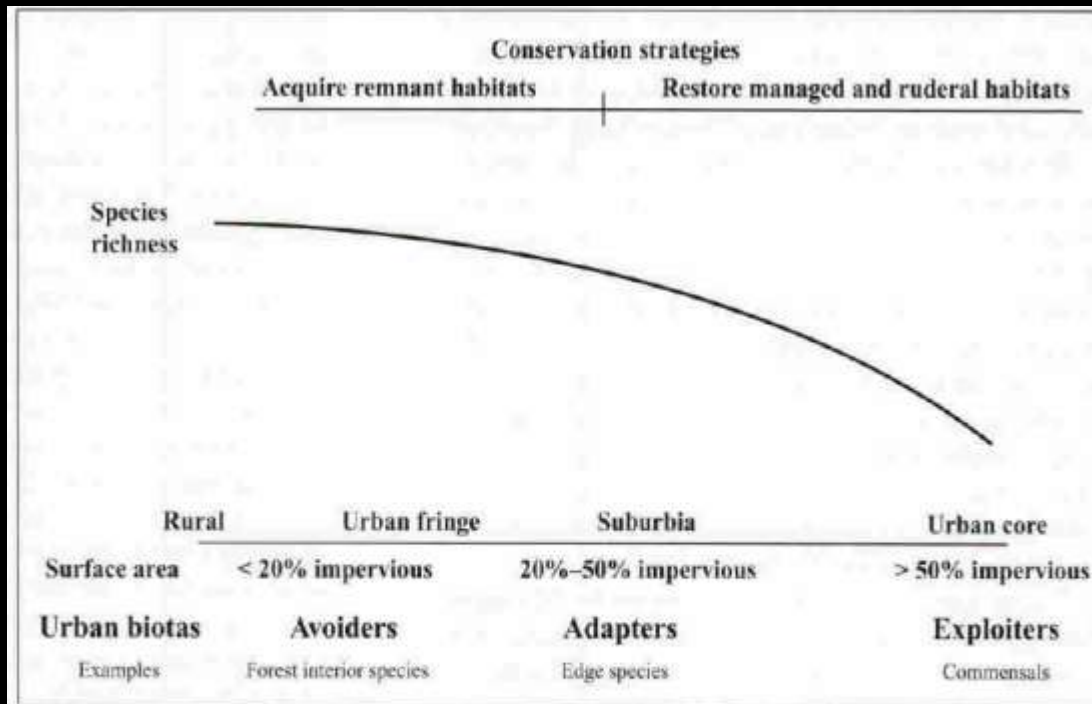


Figure 2. Urban–rural gradient. This is a very generalized and simplified depiction of changes in surface area, species richness, and composition, as compiled from a number of sources discussed in the text. Two basic conservation strategies with respect to urban sprawl are shown at the top.

McKinney, “Urbanization, biodiversity, and conservation”. *Bioscience* (2002)

Profound Ecological Changes



Urban Planning and Design



Vacant land is both ubiquitous and diverse and both a problem *and* a resource for city governments. Vacant land remains a key competitive asset for implementing a number of economic development strategies.

- Bowman and Pagano. *Terra Incognita: Vacant Land and Urban Strategies* (2004)

Unofficial Urban Nature - Marginal Nature

Wastelands - whole patches

- Vacant lots
- Dumpsites
- Industrial Wasteland
 - Brownfields
 - Greenfields
 - Quarries and Gravel Pits
- Urban Infrastructure Land
 - Power plants
 - Water treatment plants
 - Reservoirs
 - Wastewater treatment plants
 - Sewage ponds
 - Constructed wetlands
 - Stormwater retention structures
- Unusable Land - bits and pieces
 - Slopes, gullies, corners, fragments

Margins – edges and ledges

- Urban waterways
- Canals, drainage channels
- Utility corridors
- Waysides
 - road waysides
 - railway verges
- Alleys – paved, unpaved, grass
- Walkways and pathways
- Fencelines
- Walls and ledges
- Pillars and bridge abutments



Vacant Land in Cities: An Urban Resource

By Michael A. Pagano and Ann O'M. Bowman¹

Findings

A recent survey examining vacant land and abandoned structures in 70 cities found that:

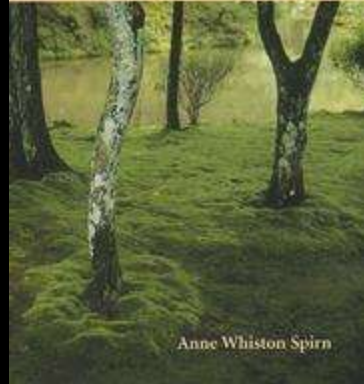
- **On average, fifteen percent of a city's land was deemed vacant.** This total includes widely varying types of land, ranging from undisturbed open space to abandoned, contaminated brownfields.
- **Cities in the South tended to have the most vacant land while cities in the Northeast had the least.** Cities in the South reported the highest proportion of vacant land (19.3 percent of total land area). On average, cities in the Northeast reported the lowest amount of vacant land (9.6 percent).
- **Cities in the Sunbelt, experiencing high levels of growth in population and land area, reported high levels of vacant land.** For example, between 1980 and 1995, Phoenix grew its population by 55 percent and its land area by 30 percent; it reported 43 percent of its land as vacant. Similar cities include Charlotte and San Antonio.
- **Cities with low proportions of vacant land tended to have high numbers of abandoned structures.** The Northeast region, with the lowest reported percentage of vacant land, reported the highest number of abandoned structures (7.47 per 1000 inhabitants).

THE GRANITE GARDEN

Urban Nature and Human Design
ANNE WHISTON SPIRN



The Language of Landscape



Anne Whiston Spirn

SUSTAINABLE URBANISM

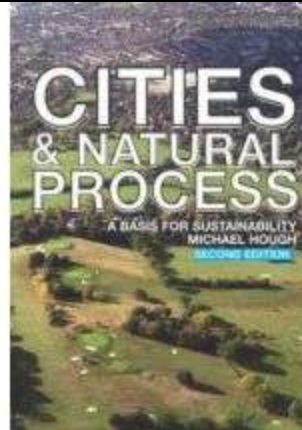
URBAN DESIGN WITH NATURE



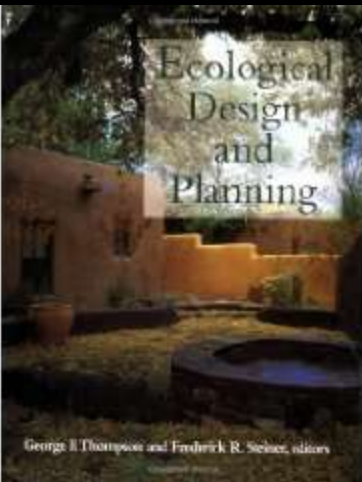
DOUGLAS FARR
FOREWORD BY ANDRES DUANY

CITIES & NATURAL PROCESS

A BASIS FOR SUSTAINABILITY
MICHAEL HOUGH
SECOND EDITION



Ecological Design and Planning



George E. Thompson and Frederick R. Steiner, editors

The Living Landscape

SECOND EDITION

An Ecological Approach to Landscape Planning



FREDERICK STEINER

With a new preface by the author

The High Line – New York



Putting Vacant Lots into Perspective



The City of Pittsburgh has no easy way of categorizing its vacant land. In fact, there is no one unifying definition used throughout the city. In some databases, vacant land means any land without a structure. Other databases classify it as any structure or parcel with no residents. There is no database that easily defines vacant land (no structure) that is un-maintained and not part of a right of way or park. Most of this variety of vacant land, (estimated between 6,000 and 12,000 lots), is symptomatic of communities with high levels of disinvestment, absentee landlords, and underserved low income residents. Vacant land can also be a cause, however, of many negative characteristics associated with urban blight. Thus, un-maintained spaces in the midst of urban communities create a vicious circle that many communities do not have resources to address.

Negative Influences, Positive Opportunities

A growing body of statistical research revolving around vacant lot issues in urban areas point toward direct, empirical correlations between vacancy and a variety of negative economic, environmental, and social influences. Thankfully, there is a flip side - equally strong evidence that reversing vacancy leads to stronger, healthier neighborhoods.

Negative Influences of Vacant Lots

The impact of vacant lots reaches beyond visual blight and decay, negatively affecting communities across economic, environmental, and social bounds.

Economic Influences

A study of vacant lots in Philadelphia estimated that the city and closely related public agencies spent \$1.8 million annually on cleaning vacant lots.

Neighborhood blocks with higher concentration of unmanaged vacant lots decreased property values by close to 18% (Wachter, The Wharton School)

Environmental Influences

Vacant Lots are targets for litter, illegal dumping, and criminal activity.

Security Influences

The City of Richmond, Virginia found that of all the economic and demographic variables tested, vacant properties had the highest correlation to the incidence of crime. (The National Vacant Properties Campaign)

Positive Influences through Greening Strategies

Strategies that address vacant land through green means are proven to have positive effects on communities in economically feasible ways.

Economic Influences

Cleaning and greening of vacant lots can increase adjacent property values by as much as 30% (Wachter, The Wharton School)

Planting a tree within 50 feet of a house can increase its value by about 9% (Wachter, The Wharton School)

Location of a house within ¼ mile from a park increased property values by 10% (Wachter, The Wharton School)

Vacant properties located near newly constructed parks were the first to sell during a revitalization project in North Philadelphia. (Philadelphia Green - Urban Impact)

Health & Recreation Influences

When people have access to parks, they exercise more. Access to places for physical activity leads to a 25.6% increase in the percentage of people exercising on three or more days a week (Trust for Public Land)

The High Line in New York City



The paradox of meddling in vacant land

However well intended, interventions by humans may result in the undoing of marginal nature in vacant land.

These habitats are accidental from our perspective, but they are deliberate expressions by the flora and fauna of marginal nature. As we impose our expectations of nature on marginal nature, we decide which organisms are allowed to remain.

The urban planning ideas of filling vacant land with development or greening it with parks and gardens displaces marginal nature.

In this contest between human and nonhuman intentions, these particular nonhumans lose,

or as Gerard Manley Hopkins puts it,

O if we but knew what we do

When we delve or hew –

Hack and rack the growing green!...

Where we, even where we mean

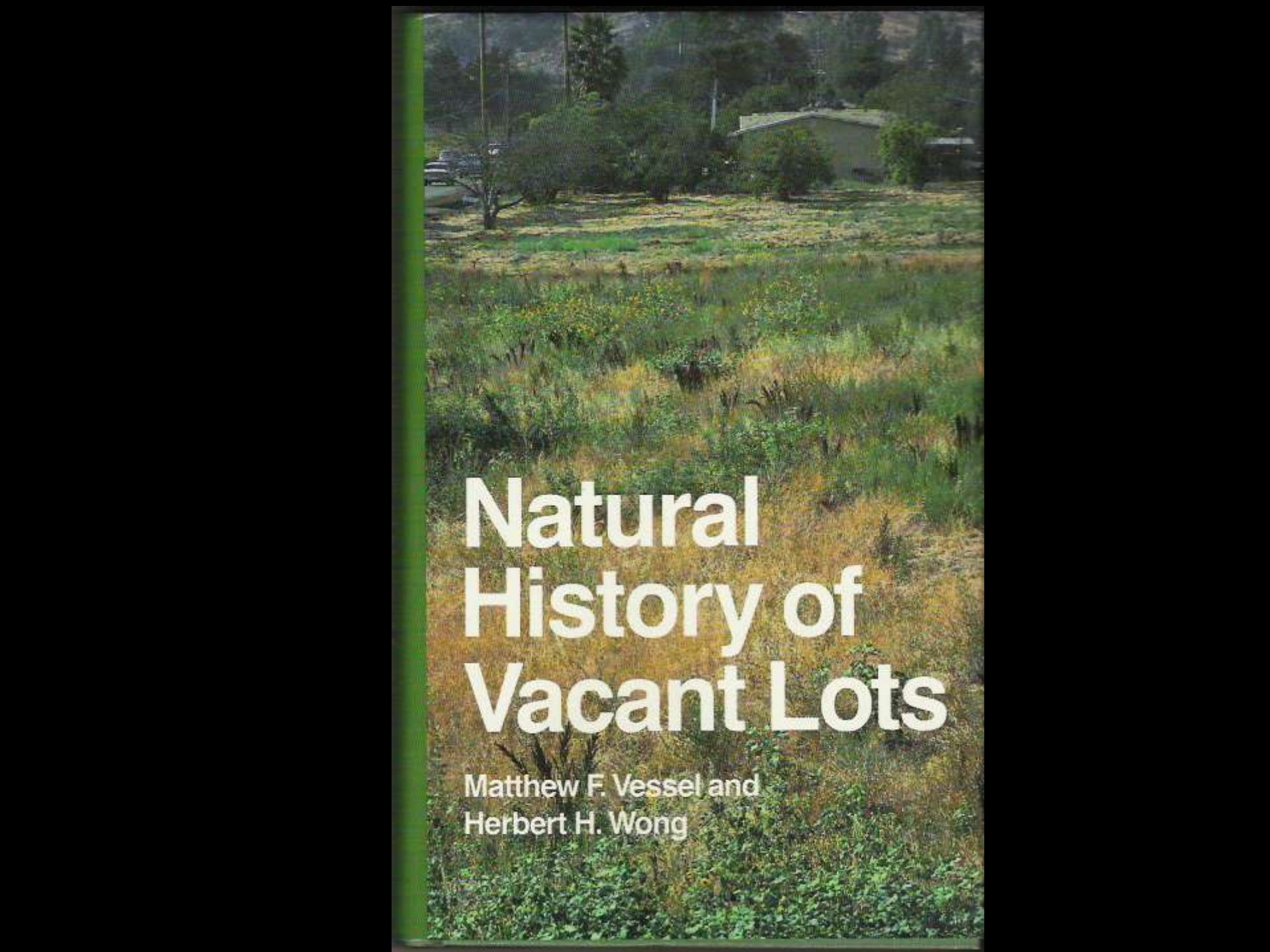
To mend her we end her,

When we hew or delve:

After-comers cannot guess the beauty been.

- from the poem *Binsey Poplars*.



The book cover features a photograph of a natural landscape. In the foreground, there is a dense field of wildflowers, including tall yellow stalks and green leafy plants. In the middle ground, a house with a light-colored roof is partially obscured by trees and shrubs. The background shows a hazy, mountainous area. The title 'Natural History of Vacant Lots' is printed in large, white, sans-serif font over the lower half of the image. The authors' names are listed below the title in a smaller white font. A solid green vertical bar runs along the left edge of the cover.

Natural History of Vacant Lots

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Bronx Lot Florilegium 2004-2005

Bronx Lot Florilegium was a multi-part project that focuses on the diverse, yet overlooked, plant life flourishing in ecosystems in the east Bronx. During the Fall of 2004, artists Bob Braine and Leslie Reed identified 57 plant species from a 15' square foot plot in an overgrown, vacant lot in the Castle Hill neighborhood.

Over the next seven months they continued to visit the site while drawing the plants. In the tradition of 18th and 19th century naturalists they have created a collection of botanical illustrations accompanied by text about the plants' uses, places of origin, and associations that people have with each plant. In addition to this installation, a Wardian Case, housing a variety of specimens from the lot, was part of the exhibit



Southwest corner infrared of Bronx Lot



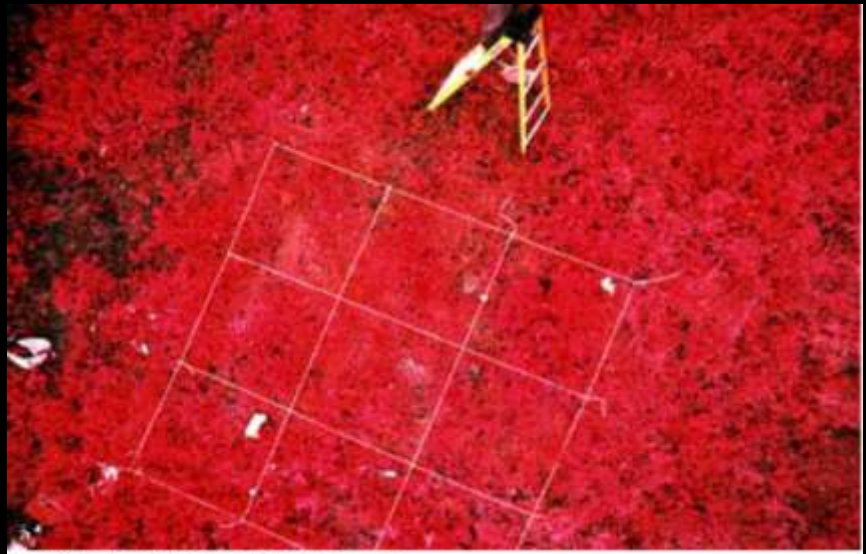
Bronx Lot Wardian Case, 2005



Mullein
Verbascum thapsus L.
Scrophulariaceae
Introduced biennial



Catchweed bedstraw
Galium aparine L.
Rubiaceae
Native annual



Bronx Lot aerial infrared photograph

Time Landscape

Landscape artist Alan Sonfist created Time Landscape as a living monument to the forest that once blanketed Manhattan Island.

After extensive research on New York's botany, geology, and history Sonfist and local community members used a palette of native trees, shrubs, wild grasses, flowers, plants, rocks, and earth to plant the 25' x 40' rectangular plot at the northeast corner of La Guardia Place and West Houston Street in 1978.

The intention was that this living artwork would be a slowly developing forest that represents the Manhattan landscape inhabited by Native Americans and encountered by Dutch settlers in the early 17th century.





TIME
LANDSCAPE



Time Landscape 2007

Cleanup time for Time Landscape indigenous garden

Of course, one person's pre-Colonial woodland is another's weed garden. One criticism leveled at Time Landscape is that many non-indigenous plants have taken root there.

On a sunny Tuesday morning in mid-September, a group of volunteers gathered to weed and clean a fenced-in plot of land on the corner of LaGuardia Pl. and W. Houston St.

"This effort will show that the community has an interest in reclaiming this land for public use," said Sara Jones, chairperson of the LaGuardia Place Corner Community Garden.

"Time Landscape is a piece of '80s art," said Sean Sweeney, director of the Soho Alliance, within earshot of the artist, Alan Sonfist. "The time has come for something new," Sweeney declared.

"This is an open lab, not an enclosed landscape," Sonfist told *The Villager* in 2007. "The intention was never to keep out all nonnative species, but rather to see how they come into the space with time."





Perceptions of American Biologists, Ecologists, and Environmentalists

(Urban growth) replaces the native species that are lost with widespread “weedy” nonnative species. This replacement constitutes the process of biotic homogenization that threatens to reduce the biological uniqueness of local ecosystems.

Michael L. McKinney, “Urbanization, biodiversity, and conservation”. *Bioscience* 52(10), (2002)

The discourse of American urban ecology, urban conservation biology, restoration ecology, and environmentalism is preoccupied by a retrospective longing for lost pristine nature and native habitats, and the rhetoric of warfare with invasive non-native species combines with a vision of urban landscapes as weedlands resulting in a bleak picture of urban ecosystems in America.

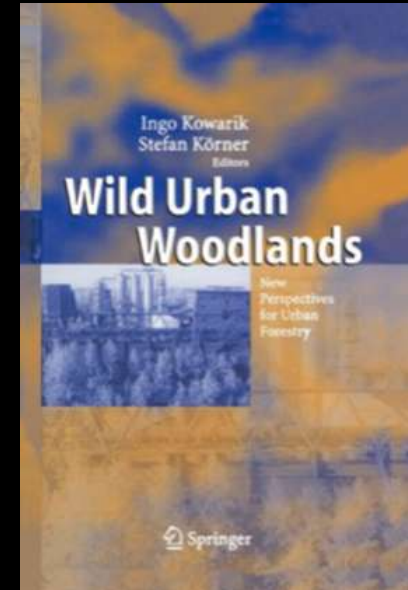


European Urban Ecology

... the reference point is not an original condition of a natural landscape, but rather a condition defined based on the current site potential and the greatest possible degree of self-regulation. From this perspective, therefore, the natural capacity for *process* is the central point, not a particular, retrospectively determined and often idealized, *picture* of nature. Ingo Kowarik *Wild Urban Woodlands* (2005)

...although wild and rather specialist species may be missing, cities are great havens for biodiversity, in terms of both ecology and species, even in industrial areas. Anthony Bradshaw in Berkowitz, *Understanding Urban Ecosystems: A New Frontier for Science and Education*. (2003)

Sudgelände Nature Park, Berlin



Perceptions of European Urban Ecologists

Unsanctioned Urban Nature - A cosmopolitan community of uniquely adapted ruderal organisms

Vacant lots - “the field laboratories where possibly new and well-adapted ecotypes of our native or naturalized wild plants will originate in the changed environmental conditions. Ecosystems which have developed in urban conditions may be the prevailing ecosystems of the future.”

Herbert Sukopp *The soil, flora, and vegetation of Berlin's waste lands*. In *Nature in Cities*, Ian Laurie, ed. (1979)



European Urban Natural History

Unofficial Countryside

I have called it the unofficial countryside because none of these places is in the countryside proper, nor were they ever intended to provide bed and board for wildlife... This is a scrappy definition, I know, covering everything from a planned suburban playground to the accidentally green corner of a city-centre parking lot.

Yet I think all these places do have one quality in common, and that is that, in them, the labels 'urban' and 'rural' by which we normally find our bearings in a landscape, just do not apply.

It is not the parks but the railway sidings that are thick with wild flowers

Richard Mabey, *Unofficial Countryside* (1973)



American Urban Natural History - Urban Nature as Chaos

Urban nature is not sublime... There's too much sterility in the form of roofs and pavement, and, oddly enough, there's also too much wildness, too many weeds and wooded borders and tangled banks, not to mention vacant lots going to brush. Of course, "wilderness" won't do to describe such landscapes either. Despite the degree of wildness, there's too much human impact, too many alien species, too few large animals to meet the legal and cultural criteria.

The fact is that urban landscapes are just too mixed up, chaotic, and confused to fit our established notions of beauty and value in nature. ... *Maybe it's not really nature at all, not a real ecosystem, just a bunch of weeds and exotics mixed up with human junk.*

John Tallmadge, *The Cincinnati Arch: Learning from Nature in the City* (2004)



American Urban Natural History - finding bearings in a disorienting landscape

This is the landscape that nobody wants. It's my cup of rejection:
Driven to this unformed scraggly ignored backlot, this not-quite
Prairie, not-quite thicket, not even natural corner of
Texas, the hardscrabble left butt of a demoralized nation,
It is my choice and my pleasure to cherish this haphazard wilderness.
No, it's not even "wild" – it's a neglected product of artifice.
Come, let us walk by an improvised lakeshore, be given a vision:
Beaches of black dust, beautiful white ghosts, this drowned forest...

- Frederick Turner, *Texas Eclogue* (1999) first stanza



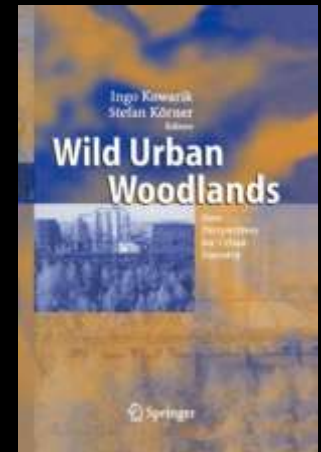
Wild Urban Woodlands – Kowarik and Korner 2005

We understand these to be stands of woody plants, within the impact area of cities, whose form is characterized by trees and in which a large leeway for natural processes makes possible a convergence toward wilderness.

The wilderness character of these urban woodlands can vary greatly. We differentiate between two kinds of wilderness. The “old wilderness” is the traditional one; it may return slowly to woodland areas when forestry use has been abandoned...

This book would like to direct the attention of the reader to a second kind of wilderness, which we call “new wilderness.”

This arises on heavily altered urban-industrial areas where abandonment of use makes such change possible. The wild nature of urban abandoned areas was discovered in the 1970s through urban-ecological research. Since then, in a very short time, profound structural changes in industrial countries have led to hundreds or thousands of hectares in urbanized areas becoming available for natural colonization processes.



The Vacant Lot - Tannehill Wild Urban Woodland





Tannehill Branch

Fort Branch

Tannehill Wild Urban Woodland

Boggy Creek

Google earth

imagery date: 3/20/11 1995

30°15'50.87" N 97°41'00.72" W 101,159 m

Eye alt: 2.13 km

Tannehill Branch Creek

Fort Branch Creek

Walnut Creek

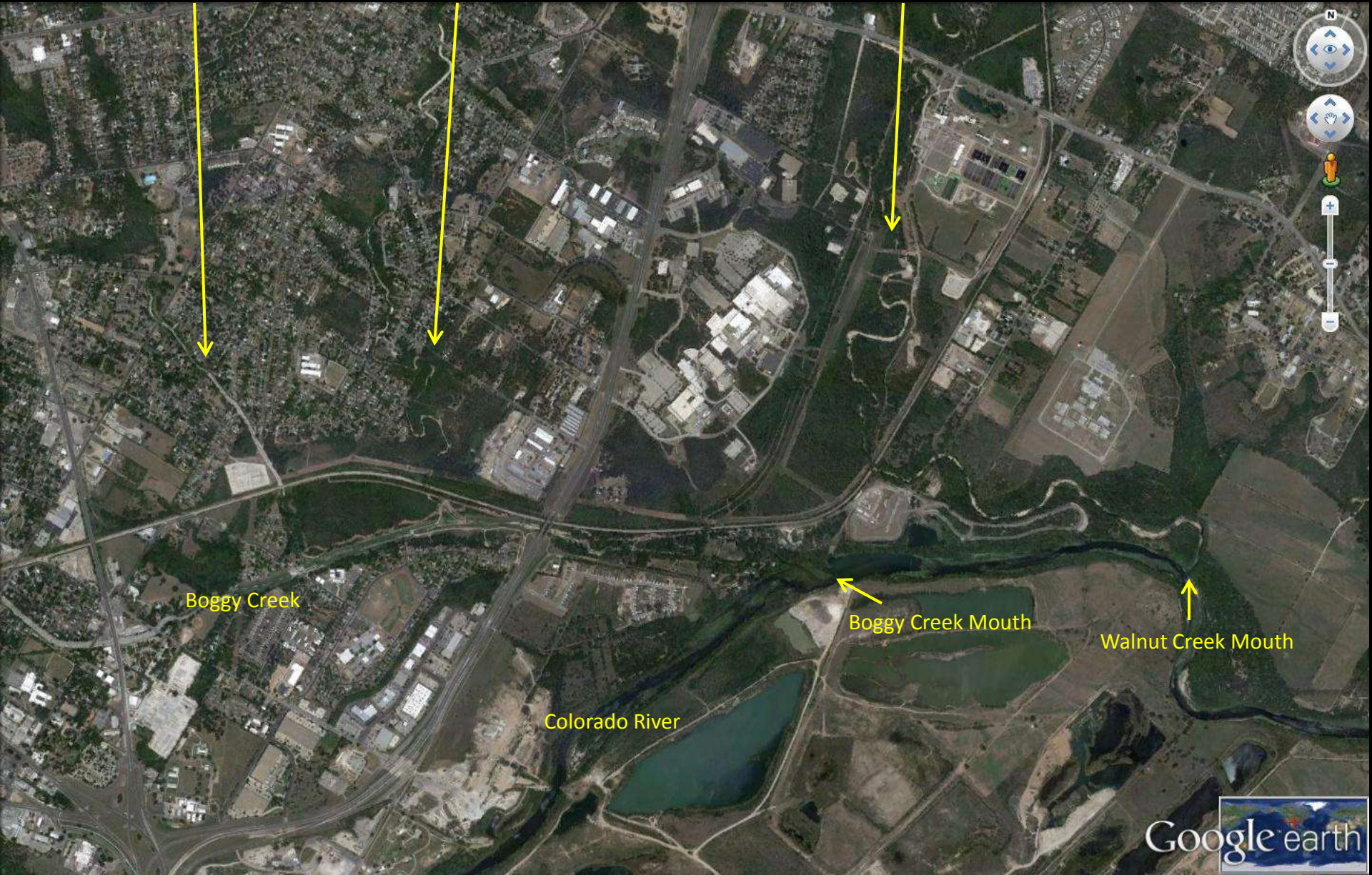
Boggy Creek

Boggy Creek Mouth

Walnut Creek Mouth

Colorado River

Google earth



3/9/2011



Fort Branch

Tannehill Branch

Tannehill Wild Urban Woodland

Boggy Creek



Imagery Date: 3/9/2011 1995

30° 15' 49.52" N 97° 40' 49.84" W elev 138 m

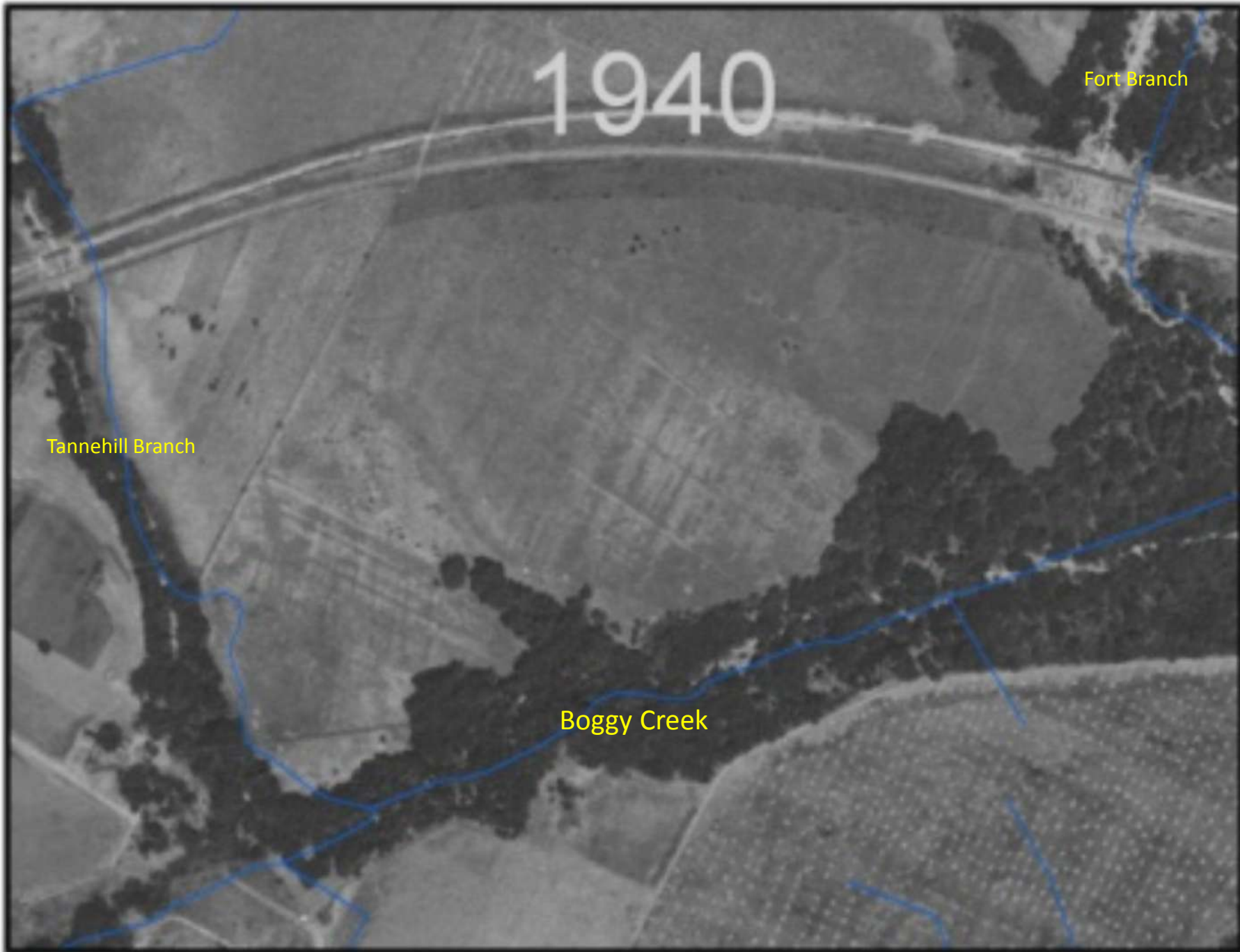
Eye alt 1.03 km

1940

Fort Branch

Tannehill Branch

Boggy Creek



3/9/2011



Fort Branch

Tannehill Branch

Boggy Creek



Imagery Date: 3/9/2011 1995

30°15'49.52" N 97°40'49.84" W elev 138 m

Eye alt 1.03 km

March 9, 2011



Tannehill Branch

Fort Branch

Boggy Creek

Google earth

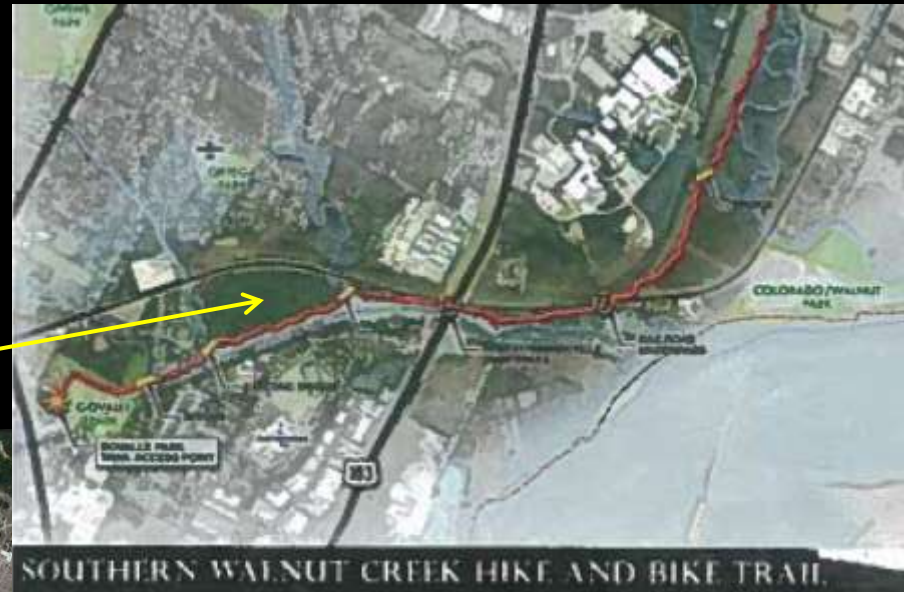
Imagery Date: 8/1/2012 1995

30°15'49.52" N 97°40'49.84" W elev 138 m

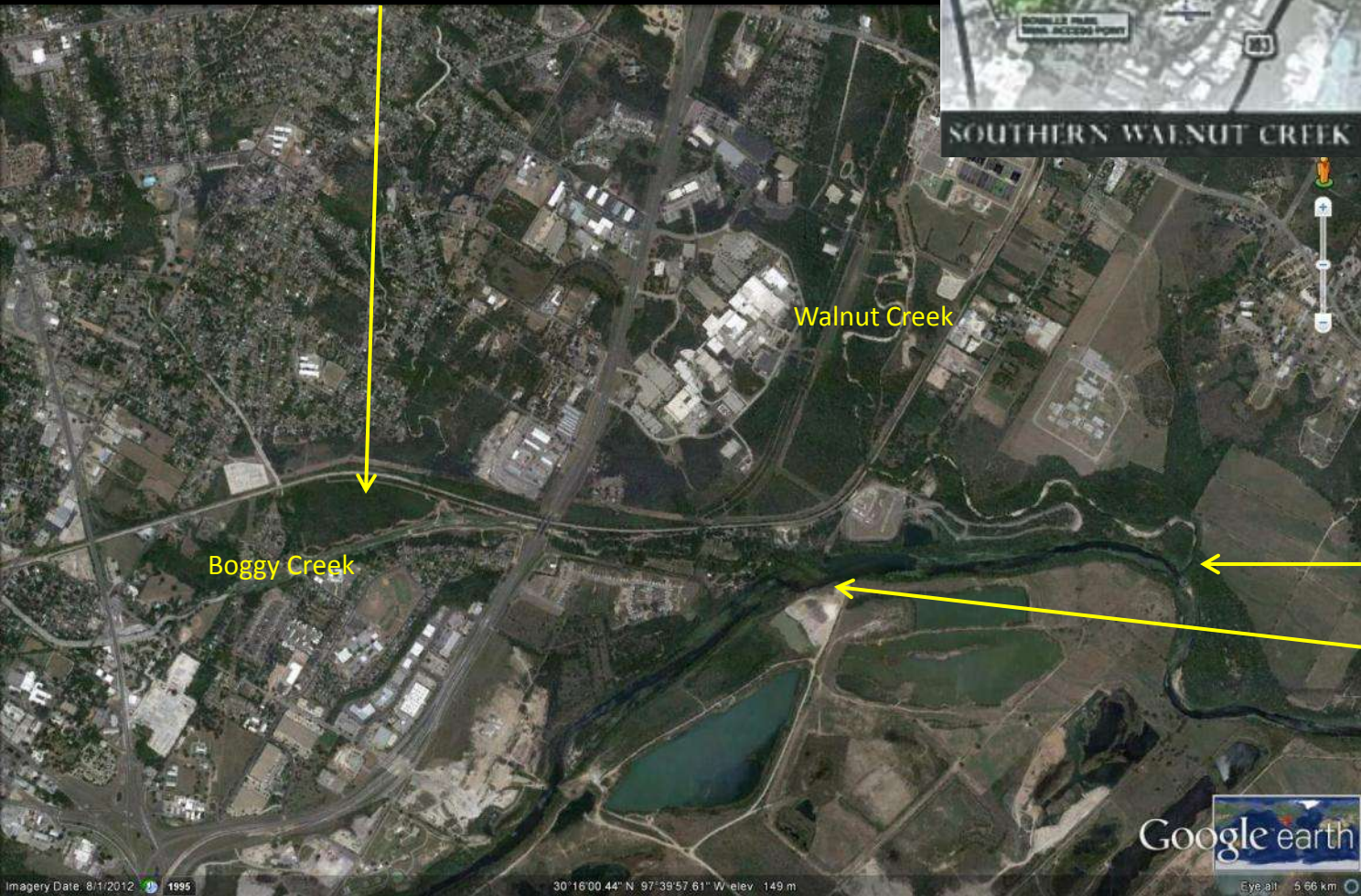
Eye alt 1.03 km

August 1, 2012

Tannehill Wild Urban Woodland



SOUTHERN WALNUT CREEK HIKE AND BIKE TRAIL



Walnut Creek Mouth

Boggy Creek Mouth



Bridge over Mouth of Tannehill Branch



Mouth of Tannehill Branch



Boggy Creek



Mouth of Tannehill Branch

Boggy Creek

Cultural Landscape
June 2012





Trails of Tannehill Branch



Trails of Tannehill Branch





Trails of Tannehill Branch





Trails of Tannehill Branch





Within the Tannehill Wild Urban Woodland





End of Tannehill Branch Cement Flood Channel



Railway and Powerline during cutting June 2012

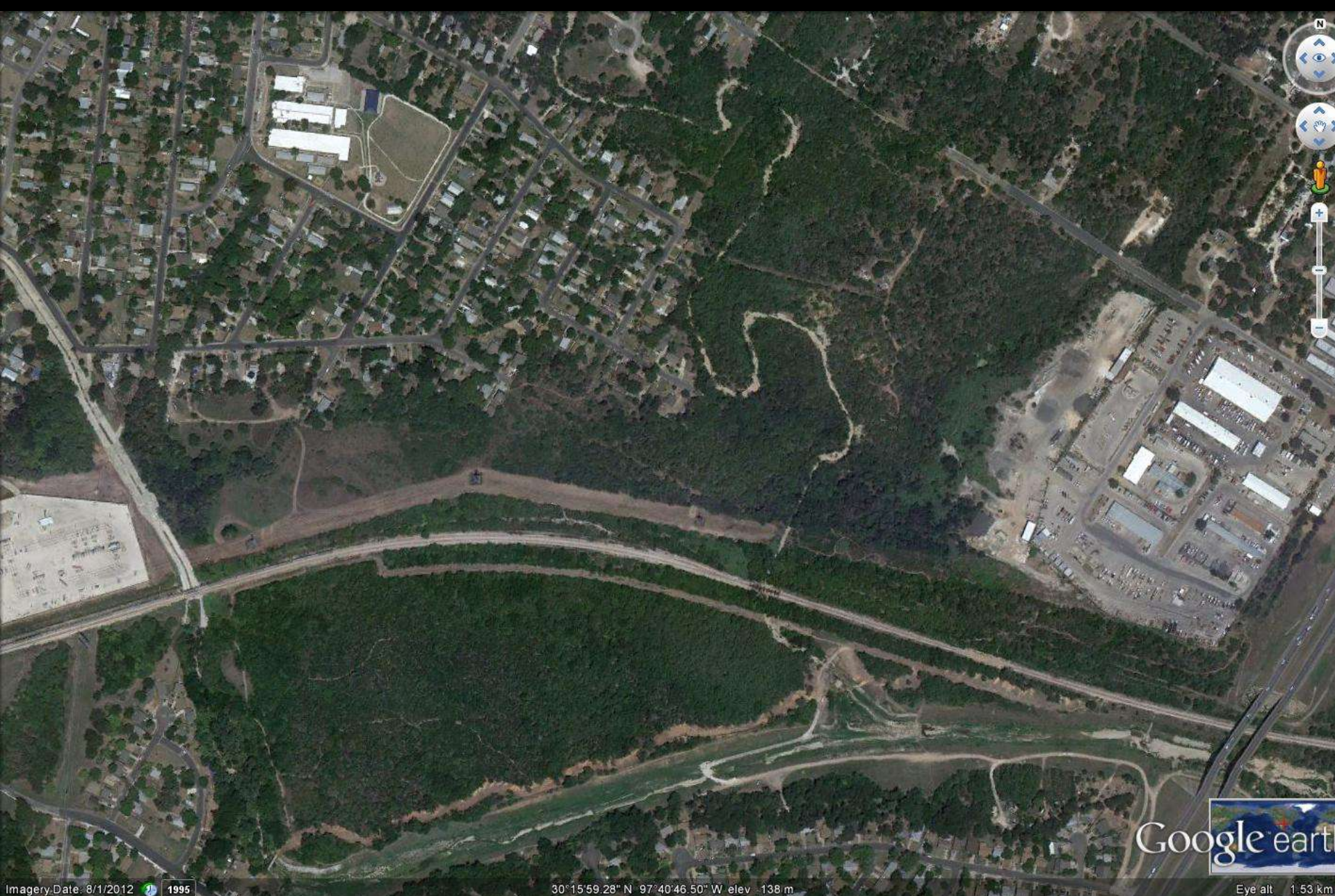


End of Tannehill Branch Cement Flood Channel



Railway and Powerline post cutting Sept 2012





August 1, 2012

June 2012



Fort Branch Mouth June 2012



October 2012



Fort Branch Mouth September 2012





Fort Branch Mouth – Trail Bridge
September - October 2012

Tannehill Wild Urban Woodland - Human/Nonhuman Coproductions

Does the nature of abandoned areas correspond to the nature conservation model that is usually oriented toward traditional pristine ecosystems or toward the remnants of the pre-industrial cultural landscape?

Can open-space planning make use of sites whose character is completely different from conventional green spaces and is instead shaped by the remnants of earlier urban industrial uses and uncontrolled ecosystem dynamics?

Is design by landscape architects superfluous or is it, on the contrary, necessary, in order to facilitate access to the sites?



Nature/Society Hybrid Places

We need to embrace the full continuum of a natural landscape that is also cultural, in which the city, the suburb, the pastoral, and the wild each has its proper place, which we permit ourselves to celebrate without needlessly denigrating the others.

William Cronon *Uncommon Ground: Rethinking the Human Place in Nature* [1995]



Ruinous Attractions – Social Space

Many waste places have these ruinous attractions: release from control, free play for action and fantasy, rich and varied sensations. Thus children are attracted to vacant lots, scrub woods, back alleys, and unused hillsides...those screened, marginal, uncontrolled places where people can indulge in behavior that is proscribed and yet not harmful to others – are regularly threatened by clean-ups and yet are a necessity for supple society.

- Kevin Lynch *Wasting Away* (1990) p. 26.



What, to a curious kid, is less vacant than a vacant lot? Less wasted than waste ground?

– Robert Michael Pyle, *The Thunder Tree*

But nature reserves and formal greenways are not enough to ensure connection. Such places, important as they are, invite a measured, restricted kind of contact.

When children come along with an embryonic interest in natural history, they need free places for pottering, netting, catching, and watching...we all need spots near home where we can wander off a trail, lift a stone, poke about, and merely wonder: places where no interpretive signs intrude their message to rob our spontaneous response...

For these purposes, nothing serves better than the hand-me-down habitats that lie somewhere between formal protection and development.

Pyle (1993)



Ruinous Attractions – Nature/Society Space “Open Space”

What a place it would be for children! They could dip in the ponds, rummage through the piles of old wartime haversacks, and pick flowers to their heart’s content – it would make no difference to the abundance of this place. But I doubt if they will get the chance. Such a desirable area of vacant ground, right on the edge of an expensive residential estate, will not stay as wasteland for long.

It might be saved by being designated as a nature reserve (it is rich enough) and be improved into the bargain. But I must confess that I cherish the hope that it will live out what little time is left to it unmolested by any humans, naturalists or not. They might keep the scrub back and introduce waterweeds to the ponds, but I fear they would lose the place its sense of wonder and surprise.

Not many planned reserves could recreate the feeling of coming upon this place by accident: through the “executive villas,” under the iron gate, past the crumbling brick ovens, already vanishing under the rose-bay, and on to this tangle of wildness, with Welsh poppies and teasels growing out of the mounds of bricks and broken glass.

- Mabey (1973) pp. 156-7.

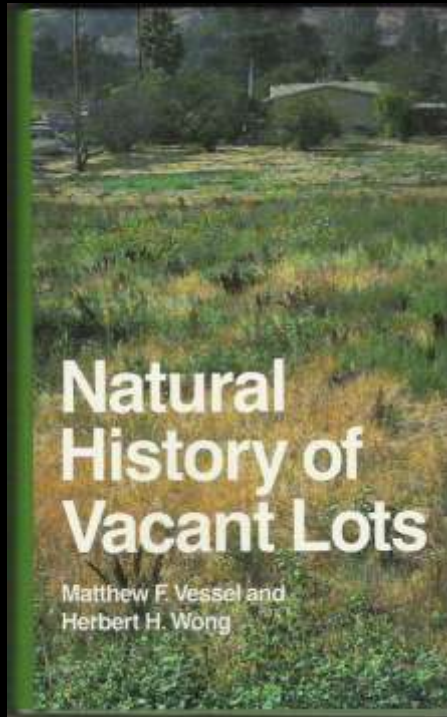


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Raymond Williams, "Ideas of Nature"