



Habitat Wall  
Photo Credit: Joyce Hwang

## TOWARD AN ARCHITECTURE FOR URBAN WILDLIFE ADVOCACY

By Joyce Hwang

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In urban environments, one could argue that animals are typically considered along a spectrum of two extreme positions: first, that animals are a form of spectacle – exemplified by birds as objects of desire – and second, that animals are a form of nuisance – seen in

the many cases of birds as “pests” to be managed. Meanwhile, in the public imagination of normative cities and suburbs, architecture is not typically considered to be part of the “animal world.” While city-dwellers might appreciate the presence of birds in the park, by a birdfeeder, or nesting in a backyard tree, the notion of “sharing” buildings and structures with animals is not commonly accepted. How might architecture play a role in starting to define and describe the varying shades of “middle ground” between

these two positions on animals in the built environment, between notions of spectacle and maintenance?

Today we see some examples of animal-friendly architecture that are emerging, such as the [Mellor Primary School Extension \(2015\)](#) by Sarah Wigglesworth (a building design that incorporated an insect habitat wall as one of its facades), but for the most part – at least in the United States – much of our urban fauna is categorized as “nuisance” animals.

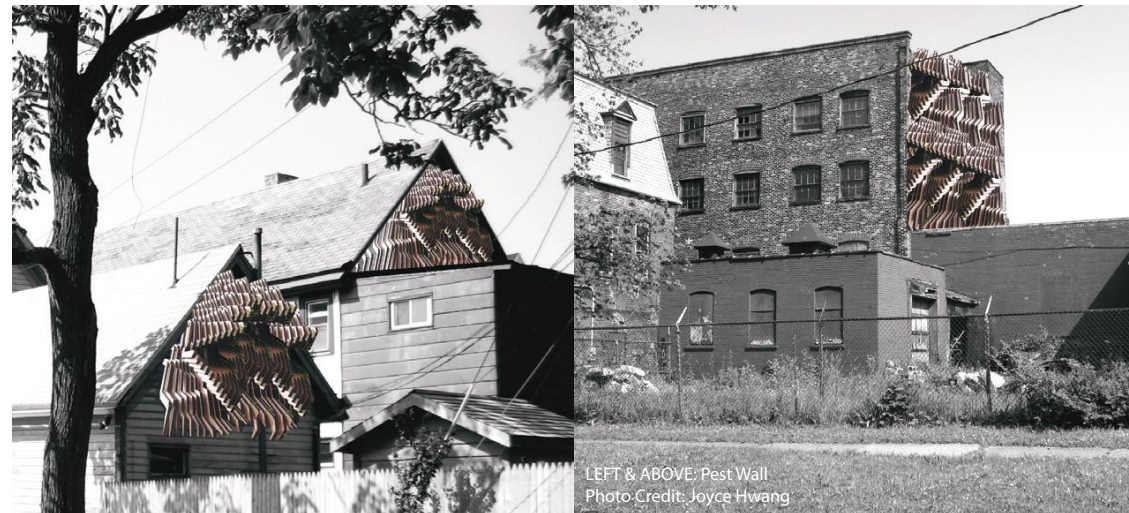
As such, we adopt an abundance of regulations that seek to control and exclude animals in the built environment. In New York State, where I currently live, the Department of Environmental Conservation manages a [list of “Mammals Commonly Causing Conflicts,”](#) which distinguishes between species that are allowed to be killed at any point in time, from species that can be killed only when acting as “nuisances.” “Pest control” services are seemingly always in demand.

Yet, despite all efforts to keep urban animals at a distance, our buildings and urban landscapes are almost always appropriated by animals in different, unexpected ways. Buildings that are not maintained, such as the many abandoned vacant structures in post-industrial cities, are often teeming with different forms of life. Bats roost in attic spaces, and birds nest on building ledges. By default, built structures become occupied by “unintended” inhabitants.

The inevitable reality is that we share our cities with many species, and as such, it is important that this reality assume a much broader cultural resonance than it currently does. Mainstream construction standards and products – such as bird prevention spikes – still reflect and reinforce our socially constructed boundaries between humans and animals. We have conditioned environments for humans inside, while casting animals outside and away, toward more marginalized territories. To challenge these sensibilities, we must first address the conflicted attitudes that humans have toward the place of animals in cities. For instance, while birds might be seen as “desirable” creatures when encountered in the park, they are suddenly seen as “pests” when they start encroaching on human-claimed territory in unwanted ways, such as depositing excrement on cars and window ledges. Indeed, human perception of urban wildlife is a critical

factor in how we address our mutual co-habitation in the built environment.

In response to this question of perception and conflicted attitudes toward urban animals, my architectural practice, [Ants of the Prairie](#), explores creative means that counter the notion of the “pest” through design. Years ago, I began to reimagine building forms, typologies, and components in my speculative design projects to accommodate all animals, particularly those seen as “pests.” For example, in a series of studies, titled “Pest Wall,” I developed schemes for building façades that might be more conducive to animal-habitation. Design iterations included thickened walls with layers for bat roosting and niches for nesting. I sloped surfaces to introduce the notion of water drainage to wash away potential guano droppings. In addition to exploring ideas through these hypothetical proposals, I simultaneously started developing and building a series of small-scale



LEFT & ABOVE: Pest Wall  
Photo Credit: Joyce Hwang





LEFT & ABOVE: Bat Cloud  
Photo Credit: Joyce Hwang

animal-inhabitation projects, as a first step to initiating a “campaign” for urban wildlife advocacy.

With an aim of drawing immediate awareness to the urgency of protecting non-human species, these projects were designed as “interventions” that could be fabricated and installed relatively quickly into the built environment. As architectural artifacts, they prominently stand out as highly visible structures, “extroverted” in disposition. Materializing objects of conspicuous character was a strategy to instigate public curiosity and combat human tendencies to hide the presence of animals – a condition that I have been referring to as an “aesthetics of invisibility.” Increasing visibility is, in effect, a way to promote increased resonance and knowledge about the critical importance of animals in our ecosystems. In these instances, the power of the architectural object is intensified through the deliberate shaping of its “[charisma](#).”

As an example, our installation Bat Cloud (2012) – a floating “cloud”

of hanging metallic teardrop-shaped forms -- was conceived of as a sparkling, hovering artifice that one might stumble upon while walking on a nature trail. It was placed in a location where one would not expect to see such an installation. Indeed, its presence in Tiff Nature Preserve has generated a sense of surprise to visitors, and has been described as “mini space capsules” in the Buffalo News. Similarly, an earlier installation, Bat Tower (2010), was also conceived of with the idea of drawing public attention to the place of animals in cities through unabashedly charismatic qualities. Unlike typical DIY or off-the-shelf bat houses, which tend to blend into the background and generally lack an aesthetic disposition, Bat Tower stands in contrast to its environment as a distinct presence in the landscape. As a tower that is composed of twisting triangulated forms, characterized by strong vertical striations, the project stands as an unapologetically formal object in a field, combatting an ethos of disregard typically shown toward under-appreciated species of urban wildlife such as bats.

The formal and spatial language of these projects emerged from research into the “*umwelt*” of bats; the specific qualities pertaining to an animal’s environment as defined by German biologist Jakob von Uexkull who describes that two different species might exist in the same general environment, but each require completely different specific environments. He uses the example of the tick and the deer: the conditions that matter to a tick are different than those that matter to a deer even though they



Bat Tower  
Photo Credit: Albert Chao



Bat Tower  
Photo Credit: Joyce Hwang

occupy the same environment (the forest). Bat Tower, for example, draws from the tendency that bats (in the Northeastern United States) prefer to roost in tight, thin spaces, between structure and boards, a condition that is seen in standard bat houses as well. Following these givens, the spatial and tectonic idea deployed was one of layering spaces, creating a lot of thin, slotted crevices, between boards that are grooved to facilitate the bat’s ability to climb on them. The larger ecosystem of bats was also considered. First, by siting the tower near potential food sources, adjacent to a pond, a location that is rife with mosquitoes and other insects in the summer. At the base of the tower, we planted a number of herbs and vegetation to attract insects that would attract bats.

Bat Cloud, too, draws formal cues from the logics of bat habitation. The topmost

portion of each pod provides two thin interiorized spaces, dimensioned similarly to the roosting spaces in existing bat house designs. Further, taking into consideration the bats’ need for protective warmth, each pod is wrapped in layers of insulation, which are held together within the folded stainless steel mesh cages. With soil and vegetation planted in the lower, “basket” portion of each pod, Bat Cloud was also conceived of as a potentially self-sustaining system. As the pods become occupied, bat guano would eventually drip down and fertilize the vegetation below, thus rendering the guano as a useful, valuable (and even desirable) element rather than as a source of disgust.

The “*umwelt*” embodied in these early projects -- that is, the spatial conditions derived from capturing the particularities of “animal space” -- were also

transported into subsequent projects. For example, Habitat Wall (2015) – a large prototypical exterior wall structure that could be implemented on the side of a building – took cues from the striated spaces of Bat Tower. A prototype of Habitat Wall was commissioned and constructed for an exhibition at the SAIC Sullivan Galleries titled “[Outside Design](#),” curated by Jonathan Solomon. Each of the wall’s of wooden boards and other salvaged building materials, such as wooden shutters, arranged to include thin gaps between boards, offering the kinds of crevice-like spaces found in typical bat habitats.

Beyond the honing of *umwelt* in articulating species-suitability, the question of resonance is also equally important. How do projects impact and shift our perception of species? The notion of evoking empathy, or a desire to alter one’s vantage point in





Bower  
Photo Credit: Joyce Hwang

looking at the world, is especially important when considering architecture as a means of advocacy.

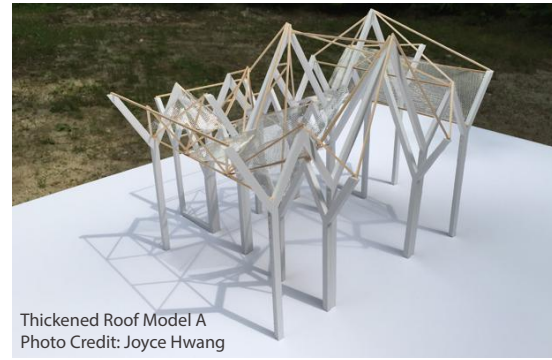
Perhaps a clear example of how humans are starting to understand the senses of non-human species is the growing urgency around bird-glass collisions. The fact that birds cannot see transparent glass is one of the leading causes of bird fatalities in urban areas. Many concerted efforts by various organizations are now addressing this issue. For example, the American Bird Conservancy and the Audubon Society have collaborated with researchers to create a set of bird-safe building guidelines. Material manufacturers are developing products, such as [Ornilux Bird Protection Glass](#), a type of glass made with a UV reflective coating, rendering it visible to birds (who can see UV light) but invisible to humans. The USGBC (United

States Green Building Council) has even outlined a LEED pilot credit for bird-collision deterrence. These are all steps in the right direction.

As architects and designers, however, it is also important to explore more visceral ways to address this issue, to more poignantly appeal to our senses. Along these lines, I recently developed a project, “No Crash Zone” (2015), which is a temporary renovation of a glass window to make visible the logics of bird-strike prevention through a graphic pattern on the glass. The project also invokes the mechanisms of the single-point perspective, capturing the visual preferences to see a framed view from a glass window. Also recently, addressing similar issues, I worked in collaboration with artist Ellen Driscoll on developing an installation for birds, titled “[Bower](#).” Sited in Artpark in Lewiston, NY, Bower is

a series of building-like fragments scattered across the landscape, each supporting a number of bird nesting boxes. These architectural fragments also feature a series of glass windows, custom designed with drawings that contain imagery of local birds and vegetation, as well as anti-bird strike patterning to draw attention to the perils of bird to draw attention to the perils of bird strikes on glass.

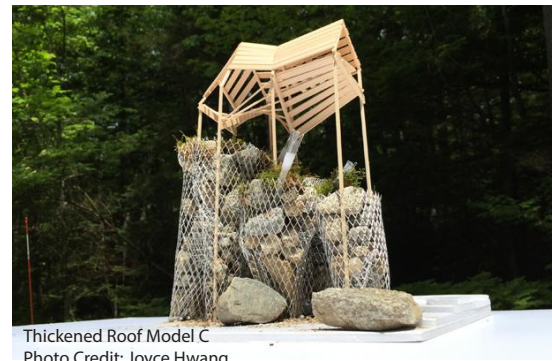
I am currently developing a series of architectural building propositions that are bringing the notion of the animal “umwelt” to a larger scale. Influenced by the spatial and material sensibilities of our small-scale installations, the ongoing speculative proposals explore strategies and tactics to reimagine the built environment in a way that gives agency to the animal population. In this thread of work, I am interested in more sharply questioning our conventional notions of building



Thickened Roof Model A  
Photo Credit: Joyce Hwang



Thickened Roof Model B  
Photo Credit: Joyce Hwang



Thickened Roof Model C  
Photo Credit: Joyce Hwang



Thickened Roof Model D  
Photo Credit: Joyce Hwang

components. In our previous projects, I asked: how might we rethink the idea of the wall as not just a barrier between inside and outside, but also as a thickened, potentially inhabitable zone? Or how might we rethink the idea of the window, not just as a framed view of the exterior, but recognizing it as a potentially fatal part of a building and therefore reconsidering it at a fundamental level?

My current series of explorations focuses on rethinking the roofs and foundations of buildings. In conventional roofing systems, gutters are already places that birds and other animals inhabit, and it is also not uncommon to find birds nesting on structures that are sheltered from wind and rain. The roof is often the place where animals find ways to enter buildings, and attics are spaces that bats (and other animals) will typically find attractive, because of the warm and stable environment it provides for them. Given these tendencies, how might we imagine a building in which the roof is a much more volumetric condition, thinking about roof structure as providing opportunities for perching and nesting? In such cases, we envision a thickened roof space that could be further developed to welcome many types of animal occupants, containing extra-large gutter-type conditions and sheltered exterior spaces and cavities. The idea of this “expanded roof” puts forward a new roof typology, one that is a multi-layered condition that allows for different types of cross-species occupation. In a similar manner, another current project incorporates a massive volumetric building “foundation,” or an expanded sense of “ground,” that could accommodate small terrestrial animals. Taking cues from the tendencies of small animals to take shelter under objects such as fallen trees, these foundations are designed using boulders, rocks, and other material that would leave leftover gap spaces for animal occupation, while also serving as a kind of base for vegetated landscape.

In order to foster a more inclusive consideration of animals in cities, architects and designers must begin to address the presence of wildlife at multiple scales. From wildlife crossing bridges and bat bridges to sculptural interventions, we see a number of efforts emerging in recent years to promote infrastructure and art installations as vehicles for steering agendas of urban wildlife advocacy. Projects that explore the possibility of buildings as spaces for wildlife



inhabitation have the potential to be particularly resonant, as this “middle scale” of design is one that can perhaps more palpably challenge our conventional notions of architecture and the built environment. Indeed, architectural typologies suggest specific ideologies, hierarchies, and modes of living through organizational spatial principles. In this sense, the act of altering an existing building typology – or proposing a new one altogether – holds the potential to instigate a drastic shift in our perspectives on inhabitation and occupancy, thereby beginning the process of cultivating a sense of empathy with non-human species.

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## Resources

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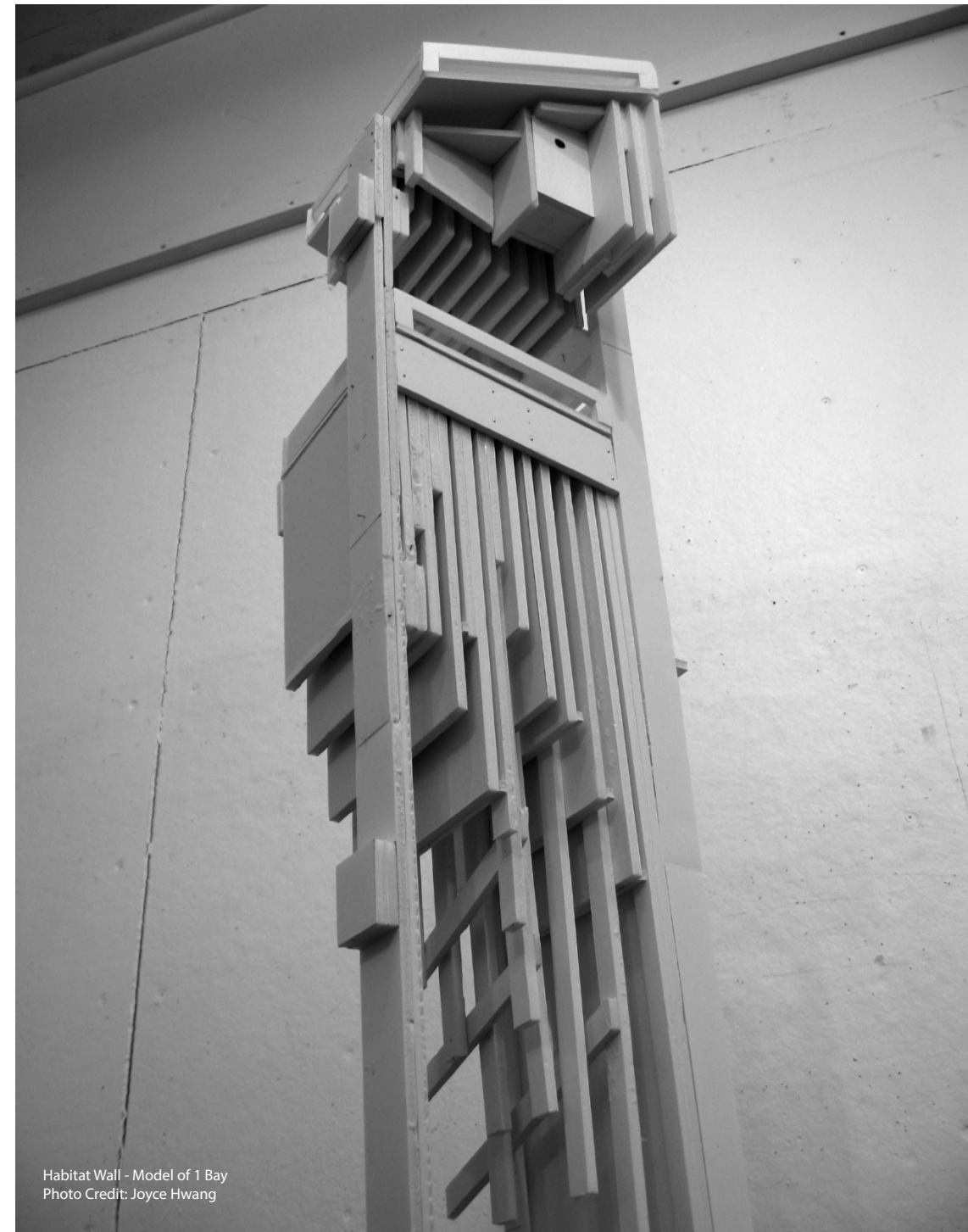
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Habitat Wall - Model of 1 Bay  
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