Birds of Lincoln Road

Wildlife, particularly birds represent the small fragment of the local ecosystem that manages to survive in the living part of urban architecture: green walls, hedges and trees. The species of birds in the city indicate the type and quantity of local vegetation, and give some indication of an area's environmental health. In this project an architect and an ornithologist survey the birds of Lincoln Road in Miami Beach and their habitat.

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On Lincoln Road pedestrian mall in Miami Beach a green heron appears in an everglades garden designed by landscape architect Raymond Jungles. The heron plies the edges of shallow ponds stalking mosquito fish and mollies in the shade of cypress trees. This highly engineered native garden ecosystem has become part of urban life in the most celebrated part of Miami Beach (Figure 1). The heron is perhaps the most catered-to bird on Lincoln Road, among many other species that have found a place there. A flock of monk parakeets nest in a row of date palms at Euclid Avenue. All along the road, mourning doves, starlings, and sparrows forage for seeds, berries, and the sugar packets at restaurant tables. Occasional flocks of ibis and sometimes a seagull land on their way to their nightly island refuge, yet they find little to eat. And a few, maligned pigeons strut the road, cruising for bread scraps.

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Figure 1: Heron in Lincoln Road landscape garden

These birds and other more specialized species could mark our way toward sustainability. Many ecological studies show that the number and diversity of wild birds in urban areas serves as an index of the quantity and type of vegetation as well as the health and continuity of ecosystems. This correlation is particularly important in South Florida where mitigating the heat island effect and providing shade at the street level is vital to creating a walkable, sustainable city. In addition, South Florida has one of the richest and most diverse bird populations in the country and provides crucial habitat for migrating birds as they make annual journeys north and south. Integrating bird habitat into all aspects of architecture and urbanism becomes essential as bird populations are increasingly challenged by climate change and sea level rise. In addition sharing the city with diverse species of birds – not just pigeons - could perhaps remind us that we are not the only species on the planet. Extending architectural design to include habitat vegetation could be a positive result of our response to climate change, improving the quality of life even as cities become carbon neutral.

In this project, an architect and ornithologist worked together to survey the species of birds that now inhabit the Lincoln Road area in Miami Beach. We

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surveyed types of existing habitat, then speculated on strategic planting and design modifications that could open the area to a greater diversity of species. We focused on vegetation that is integral to built spaces of Lincoln Road. This living part of the architecture is not segregated out into a distinct landscape architecture separate from built space. In particular, green walls and roofs, window box and courtyard planting, hedges and screening create architectural spaces in conjunction with built walls and openings. These elements are increasingly becoming part of an architectural design vocabulary. We challenge architects to think about them as living systems, not just green fuzz added to the drawings.

The architect and ornithologist look at the same features from distinct points of view. The architect sees the spaces created by both living and non-living elements. She is sensitive to scale, light, sequence, and composition. The ornithologist knows what birds need in a habitat - their programmatic requirements: reliable sources of food, protection from predators, nesting sites, and places for their specific patterns of social life. We both consider on how the existing vegetation works from our separate points of view and speculate on how it might be improved.

Ornithologists and the birds they study consider habitat at several scales. Some species rarely venture out of the neighborhood, whereas other species keep watch over a territory of several miles and migrating birds travel between continents. Each depends on specific resources for feeding, nesting and social life. They select places to live accordingly.

Figure 2: Green areas shown darker

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At a large scale Lincoln Road traverses an urban island spatially isolated from any area that could be considered a woodland or wild area. The only green spaces are a golf course a few blocks North, a park a few blocks South, street trees, and backyard gardens scattered in the city fabric (figure 2). These areas are planted largely in exotics: palms of all kinds, flowering trees, and grass. The plantings favor birds that eat palm nuts such as parrots, seed eaters such as doves and house sparrows, and versatile omnivores such as starlings and grackles– only the doves and grackles are native to Florida. These birds and other more occasional visitors inhabit Lincoln Road and go about their lives without paying much attention to the throngs of people walking up and down and eating in the restaurants.

Mourning doves and house sparrows are common on Lincoln Road, but pigeons are explicitly not welcome. Building managers have screened off ledges and eaves where pigeons prefer to roost and keep trash under strict control. Discouraging pigeons opens a niche for mourning doves that roost in trees rather than on buildings and prefer seeds to bread. Their abundance attracts a cooper's hawk, which is sometimes seen perched on top of the Victoria's Secret.

A cluster of date palms at the center of Lincoln Road makes a good home from the point of view of the resident colony of monk parakeets. Located in the middle of the island, the cluster is surrounded by a city planted in exotic palms, which produce copious nuts, dates, and berries. For monk parakeets, their dining table is all around them. They chose to nest in the dense, fibrous crowns of the date palms (also exotic), where they could construct nests close together, a couple of families per palm (figure 3). The specific spot is protected from the noise of traffic, so the parrots can hear each other well. The trees are close enough together that they can visit each other easily. The crowns of the trees are high enough and the surrounding roofs low enough that they can to spot any predator that might approach. They selected this site over another row of date palms a couple of blocks away, which has traffic noise and adjacent tall buildings. Every day the parakeets fly out over the city, usually in groups, to find ripening fruits and palm nuts.

Exotic parrots can thrive in landscapes planted with exotic tropical palms and fruit trees. Monk parakeets in particular evolved to live in savannahs with few trees, a landscape somewhat similar to the roofscape of the city. Other species of parrots such as Amazons and Macaws are familiar in more densely-treed parts of Miami. They evolved to live in forests canopies high above the ground.

From the architect's point of view, the date palms frame a feature of Lincoln Road, a simple oval of grass raised up about 20" where children run and lovers sit. The trees act as open air columns that give the feature a spatial presence in the center of the pedestrian street. Their wide spacing keeps the crowns of the trees from touching each other so they appear as a series rather than a group. No understory plants come close so the tree appears sculptural and the space between them framed graciously. Their scale is architectural, rising above the buildings on either side they give the street loftiness and grace. The design works well for the purposes of the people below and the parakeets above. The chatter of the birds adds to the chatter of people, giving the place character and life.

Figure 3: Monk parakeet in date palm nest

Frank Gehry designed a park adjacent to the New World Symphony building for outdoor movies and concerts. It features tubular trellis structures that contain bougainvillea, a South American flowering vine. For an architect, the trellis and bougainvillea give the park sculpture and tropical color. But they don't do much for birds. Bougainvillea has voracious thorns that provide good cover, but the flowers do not produce much seed. If more productive vines were added to the mix, then the sculpture would sing with life.

The west wall of the Van Dyke Café is covered in a creeping fig vine. From an architectural standpoint, the green wall beautifully shade the masonry, keeping it cool under the intense western sun and gives the building distinction. The green wall as well as the many hedges around the city are significant architectural elements that shape urban space. From a bird's point of view they provide shelter and can be a good place to nest. Yet because they are usually only one species of plant, they offer either feast or famine. When the figs ripen, birds feast, yet the rest of the year hedges and green walls are barren.

Hedges, green walls, green roofs and screening trees are increasingly becoming part of an architectural repertoire. Planted more thoughtfully, they could provide crucial elements to bird habitat that are now largely missing in the city. For example, if hedges included a variety of plants, particularly native shrubs and trees that produce berries, then they would have more visual texture and color and they would provide food and shelter to a broad range of birds across the year. For example they might support orioles, cardinals, and catbirds, which are now rare in the city. These residents would add birdsong to the city's sounds.

When birds can live well in the city, with enough vegetation, including canopy trees and productive understory shrubs, then we live better also. Vegetation integrated into architecture can mitigate the heat island effect, cool and clean the air, and soak up rain water to mitigate flooding. Birds play an important role in a vital urban ecology. They eat fruits and berries before they drop and rot. They catch insects and rodents. Most birds don't depend on us. They make their own way if we give them half a chance. And their presence gives us a poetic sense of a larger, living world.

Returning finally to the green heron. He appears regularly. The Lincoln Road ponds are on his route, but he has other stops as well. To see him there confirms my faith in the persistence of the natural world. The heron is so out of place and the landscape so contrived that it seems almost absurd, yet there he is anyway, fishing. That heron, and the chattering, monk parakeets, all seriously displaced from any native Florida beach ecology nonetheless seem to represent the strength of life.

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Figure 4: The living part of architecture

ENDNOTES

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