

### Imagining green cities

Cities today are dominated by pavement, concrete and glass. Trees, parks and gardens are luxury amenities crammed in between soaring buildings. For lower income residents, such luxury may be non-existent.

But we are gaining a greater appreciation of how important green spaces are, not just to aesthetic taste but also physical and mental health. Now this is being combined with a growing interest in sustainability, and creative thinkers are imagining cities that produce much of their own food



*Artist's concept of a Skyfarm, proposed by a South Korean designer.*

and energy, and much less pollution. Aprilli Design Studios in Seoul, South Korea, is proposing what they call "urban sky farms." According to the company, "The primary structure has a large, root area at its base to provide stability and spread the weight of the Skyfarm out across the ground. A trunk section rises up from the root and spreads out into eight vertical branches that are connected together by trusses to provide structural reinforcement."

The branches each support 60-70 farming decks, which can be described as the leaf sections of the tree. The decks are spread out as much as possible to ensure they receive adequate exposure to sunlight. Each deck has heating and LED lighting systems that are used to create "optimal environmental conditions" for farming.

Of course this concept is just on the drawing board. Some very real progress is being made in New York City. According to National Geographic, there was a study in New York City about a decade ago. It demonstrated that "for every \$1 spent on a street tree, that oak or honey locust provided more than \$5 in 'eco-system' services — everything from energy savings to storm water mitigation to better public health." Then mayor Michael Bloomberg was so impressed, he launched MillionTreesNYC. Since 2007, a million trees have been planted in the city.

Bloomberg also launched PlanNYC. This initiative included a goal of dedicating 4,000 acres in the city so that every resident would live within a 10-minute walk to a park. By 2012 that goal had become a reality for 75% of the city's residents, and progress continues. PlanNYC is also looking at natural ways to enhance the city's resilience against flooding. This would include constructed wetlands, reefs and breakwater islands.

But Bloomberg was not content to just improve New York. In 2007 he launched the Mayors Challenge. This encourages cities to develop creative new approaches to solving urban problems, and these solutions have the potential to spread. Bloomberg Philanthropies is offering the winning cities millions of dollars and expert support to these innovative ideas. Finalists also become part of a global innovation network. They share ideas with other cities looking for solutions to a wide range of challenges.

Another innovator who is imagining greener cities is the sometimes controversial architect and urban

*(Continued, Page 2, Green cities)*

*For the person who has everything ...*



Really! This year's Hammacher Schlemmer catalogue is offering a life size replica fossil skeleton of Tyrannosaurus rex. Of course the recipient would need a bit of space for this – it's 40 feet long, and fifteen feet high. And a bargain at just \$100,000. And you don't need to worry about assembly – a "complimentary assembly crew" will take care of that for you.

If this is a little out of your price range, you could get just a skull for just \$9,500.

## "The Trees"

A deceptive simplicity seems to mark the woodland, now that the leaves have fallen. The trees have been reduced to their basic architecture, trunk and branch and twig. You can see the framework of the big oak's green summer dome, the tapering spire of the ash and the aspen. But the clean, clear light of late autumn, especially on those rare days with bright sun and vivid shadows, reveals in the woods a complexity of color and texture, now that the deep shade of summer is gone.

The trunk of the big white oak is marked by long, narrow, flat scales of bark, brown as weathered cork. The sugar maple's gray bark has a shaggy look, full of light and shadow, but not half so shaggy as the trunk of the shagbark hickory that seems to be sheathed in well-weathered shingles, all loose at the butt.

The aspen's bark is smooth and has a greenish cast. The leaning birch is chalky white, with horizontal lines and big, dark "eyes;" where the thin outer bark is peeling, the ruddy underbark is revealed smooth as onion skin.

Tree by tree, they are individuals, stripped now to their true and fundamental character, lithe or rugged, young or old, frail or sturdy. The distractions of summer and spring, the brief glory of autumn's color, are gone. The infinite variety remains, clearer than ever. Now one can see not merely the woodland but the trees.

*(This is copied from a yellowed newspaper clipping more than 50 years old. Unfortunately it carried no byline, so the author is unknown.)*

## Green cities, *continued*

planner Michael Sorkin, also a New Yorker. He envisions repurposing buildings to include vertical farms. There would be indoor greenhouses and exterior space dedicated to growing things like fruit trees. Rooftops would be transformed into growing spaces and solar panels could supply at least some of the power for the indoor gardens.

Urban farms could also contain water treatment area, farmers' markets, viewing decks, public spaces and restaurants. Residential buildings will also be sprouting greenery, providing cooling and improved air quality, as well as space for food production.

Small steps have been taken so far, but many people are already applying their imagination and creativity to the concept. We can only imagine cities of the future, but it is a safe bet they will be greener, as cities around the world take measures to address climate change.

*Artist's impression of a vegetation-covered high rise that would reduce the need for air conditioning, improve air quality, and provide food and reduce the city's carbon footprint.*

*The interior of an urban farm could provide an oasis, with space for meetings and offices as well as food production.*



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