Re-Envisioning Diversity: Integrating Urban and Rural Pollinator Habitat

Summary

Bees, both wild and managed, are vital to sustaining diverse ecosystems and maintaining our food supply, but their populations are dwindling. This session explores local and national plans to integrate pollinator habitat into existing urban and rural frameworks across the US.

Learning Objectives

Highlight pollination issues and propose a treatment to the problem as it relates to planning and landscape architecture

To encourage landscape architects to be involved in local and national policy making

Showcase the importance of forging political partnerships to encourage ecological design

Educate the professional community on advances and partnerships within the landscape architecture community

Speakers

Heather Holm [Author, Holm Design & Consulting LLC, Minnesota]
Danielle Bilot [Associate ASLA, Kudela & Weinheimer, Texas]
Laurie Adams [Executive Director, Pollinator Partnership, California]
Ann Kalayil [Regional Administrator, GSA, Illinois]
I. Pollinators and Their Purpose

A. Overview of pollination types and associated statistics
   i) Wind, water and insect

B. Honey bees’ lifestyle characteristics
   i) Sociality
   ii) Commercialization and its effects on the health of pollinator populations
   iii) Issues facing honey bees and many other pollinators
       - Diseases and pests
       - Chemical usage

C. Native bees - the “Cinderella” pollinator
   i) The real ‘at risk’ bee
   ii) Pollination of food crops and flowering ornamental plants
   iii) Nesting biology, habitat needs
       Focus on:
       a. Lack of year-round foraging
       b. Lack of adequate distribution of habitat, landscape dispersal
       c. How we can better incorporate pollinator/native bee habitat into urban areas
II. Retrofitting the Urban Environment to Support Pollinator Habitat

A. Lifestyle characteristics:
   Honey bees vs native bees
   i) Safety
   ii) Efficiency
   iii) Activity duration and plant selections

B. Existing knowledge gaps
   i) Limiting & non-limiting characteristics for native bees
   ii) Appropriate ratio of nesting to foraging
   iii) Habitat distribution

C. Site design framework, 4 steps
   i) Identification of local native bee species
   ii) Prioritization of foraging plants
   iii) Site design strategies
   iv) Habitat distribution strategies

D. Case study: Houston, TX
   i) Implementation of 4-step framework
   ii) Integration of underused urban land
   iii) Habitat maps

E. Implications
   i) Design Process
   ii) LEED + SITES analysis
   iii) Rural lands - same distribution techniques
   iv) Wildlife corridor habitats that bisect cities
   v) Education | Awareness
III. Pollinator Partnerships and Opportunities for Landscape Architects

A. Introduction to the Pollinator Partnership and the NAPPC Collaboration

B. National initiatives and opportunities for Landscape Architects
   i) White House Pollinator Action Plan
   ii) Million Garden Pollinator Challenge
   iii) S.H.A.R.E. projects
   iv) Highway BEE Act

C. Individual Initiatives for Landscape Architects
   i) Corporate campuses, roofs, worship centers, schools, etc.
   ii) Business for Bees
   iii) Monarch Wings Across America
   iv) Bee Buffers
   v) School Garden Kit
   vi) Pesticide (continuing education)

D. Resources
   i) Ecoregional Guide | App
   ii) National Pollinator Week
   iii) Monarch manuals

E. Ideas | Challenges
IV. **Federal Sustainability:**
General Services Administration [GSA]

A. GSA Great Lakes Regional Sustainability Plan
   i) A holistic approach for integrating sustainability into the way we manage our buildings, our supply chain, our fleet, our workplaces, and our communities

B. GSA as a driver of innovation and industry standards
   i) Planning for Federal sustainability in the next decade
   ii) White House Pollinator Action Plan involvement
   iii) Public Buildings Service P-100

C. Case Study: US Courthouse, Hammond, IN
   i) Native plants and water conservation
   ii) Maintenance cooperation
   iii) Sustainable pest management solutions

D. Empowerment and Relationships
   i) Educating colleagues, managing public expectations
   ii) Sustainability as a process instead of a goal
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For More Information...

Highway BEE Act:
http://www.pollinator.org/BEEAct.htm

National Pollinator Week [U.S.]:
http://pollinator.org/pollinator_week_2015.htm

North American Pollinator Protection Campaign | NAPPC:
http://pollinator.org/nappc/

Pollinator Partnership:
www.pollinator.org

U.S. General Services:
http://www.gsa.gov/portal/category/100000

University of Minnesota Bee Lab:
http://www.beelab.umn.edu

White House Pollinator Research Action Plan:
https://www.whitehouse.gov/sites/default/files/microsites/ostp/Pollinator%20Research%20Action%20Plan%202015.pdf

The Xerces Society [for Invertebrate Conservation]:
http://www.xerces.org