

Biophilic DC

Nature in the Heart of the City

Stella Tarnay

ACPAC - MWCOG

June 19, 2017



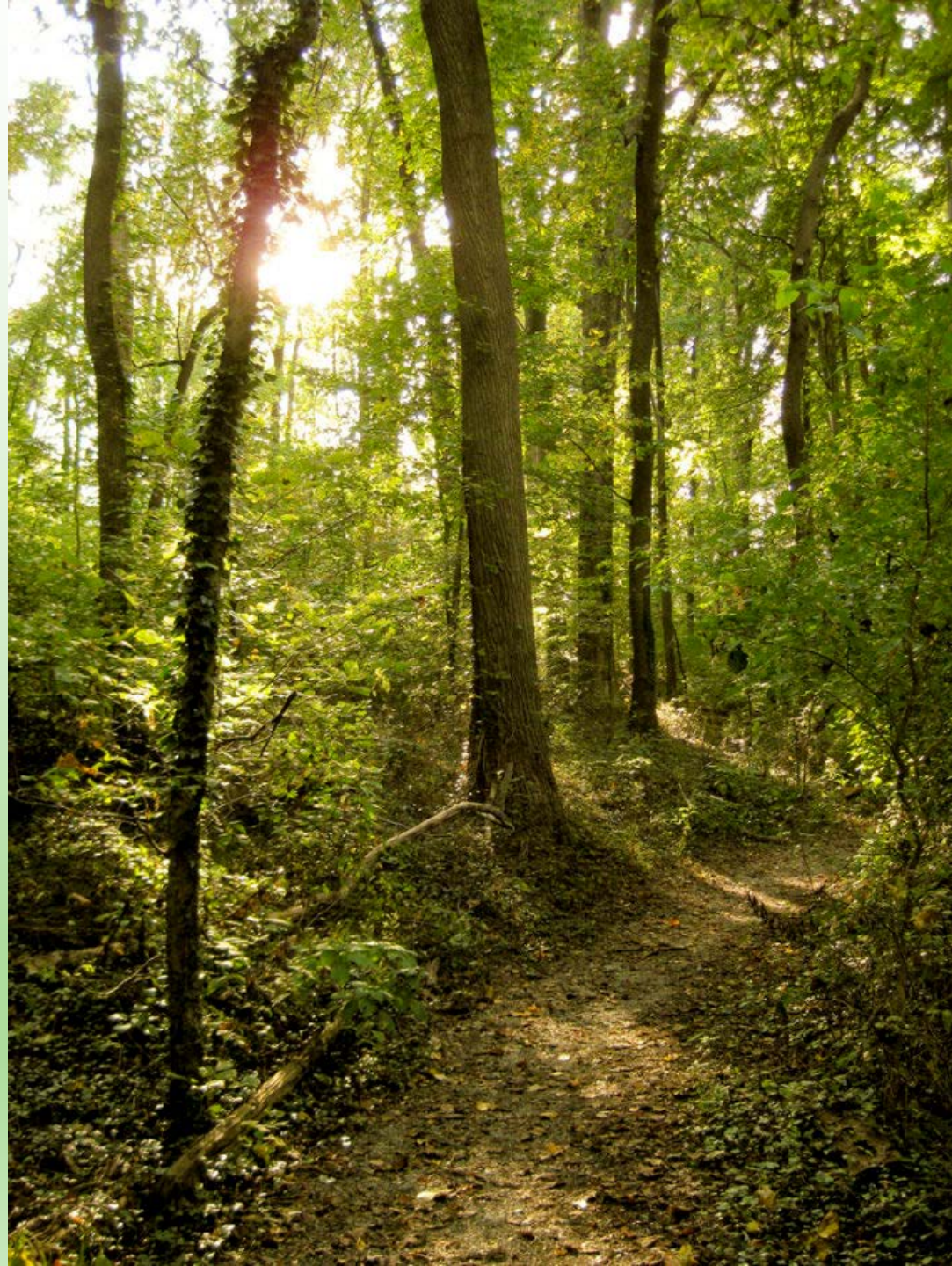
PLATE
Of the City of
WASHINGTON.



Lat. Capital 38. 45. N.
Long. — 0. 0.









Flourish
1994-2004











Biophilia:

“Love of Life” “Friendship with the living world”

The innate human urge to affiliate with other living species



Pic: Rick Friedman for The New York Times

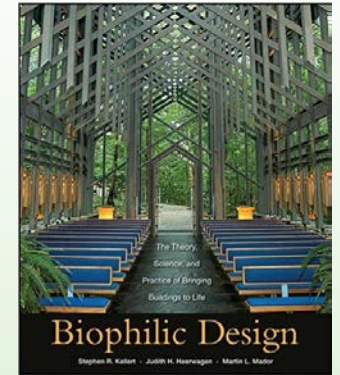


Pic: Metropolis Magazine



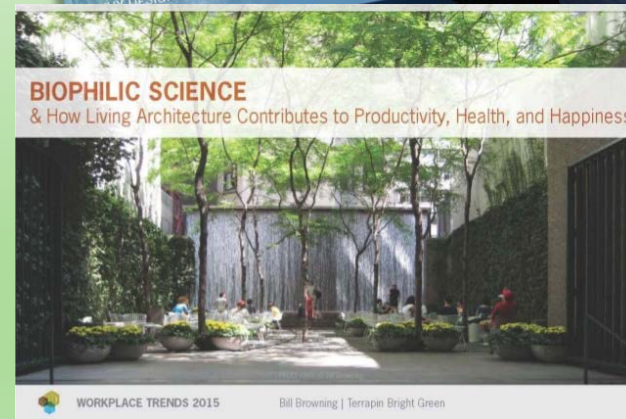
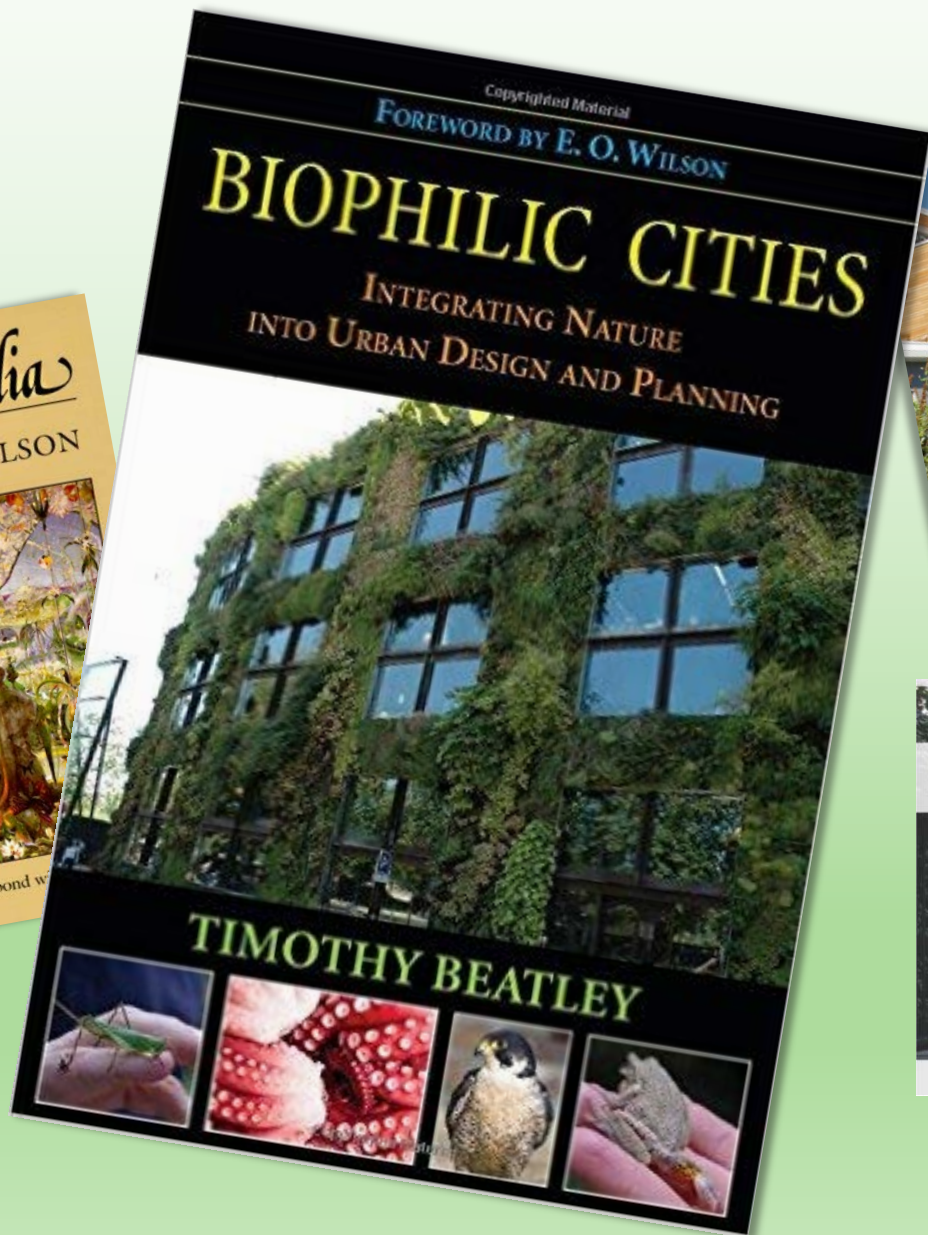
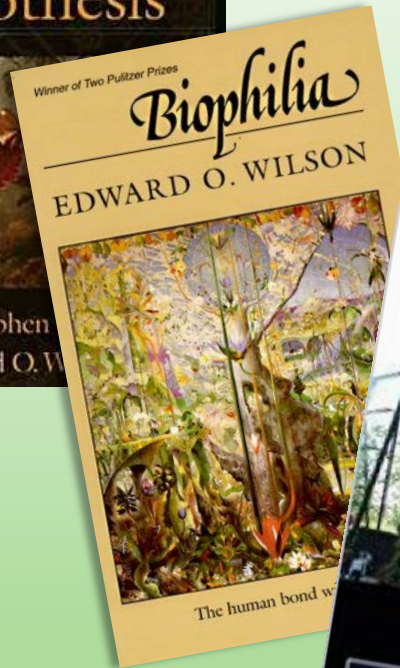
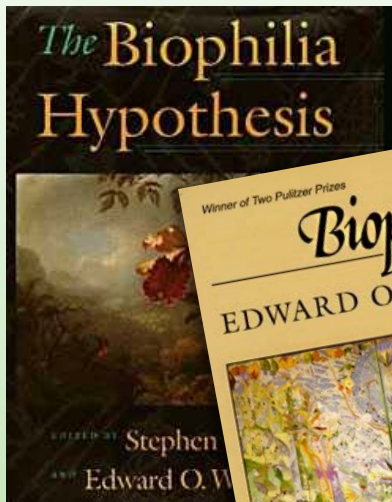
Pic: Wicoff Design Studio





Thorncrown Chapel
by E. Fay Jones









Oslo, Norway

Pic: MMag

Cities as Hubs of Nature – new realities

- An urbanizing world—over 50% of humans on planet live in metropolitan areas and growing—their primary experience of nature will be in city.
- In some cases cities are repositories of biodiversity. Conservation has moved to the city.

Cities as Hubs of Nature – new knowledge

- Public health studies show that urban residents who have contact with nature are healthier— e.g. Toronto tree study. Community and individual health. Growing your own kale makes you happy!
- Communities with accessible nature shown to have lower crime rates.
- School children and office workers perform better in light-filled, nature-oriented spaces – e.g. USGBC studies.
- Public health studies at Harvard School of Public health show that people respond better to sounds of rich and diverse soundscapes.
- Biodiverse urban spaces: healthier for people and for ecosystems.



Community and Public Health (Toronto)

Biophilic Cities – a growing understanding

Biophilic Cities are cities that contain abundant nature; they are cities that care about, seek to protect, restore and grow this nature, and that strive to foster deep connections and daily contact with the natural world.

Nature is not something optional, but absolutely essential to living a happy, healthy and meaningful life.



Tim Beatley, Founder, Biophilic Cities Network





Natural World at Our Doorstep













Familytree.cm

Biophilic DC Working Group

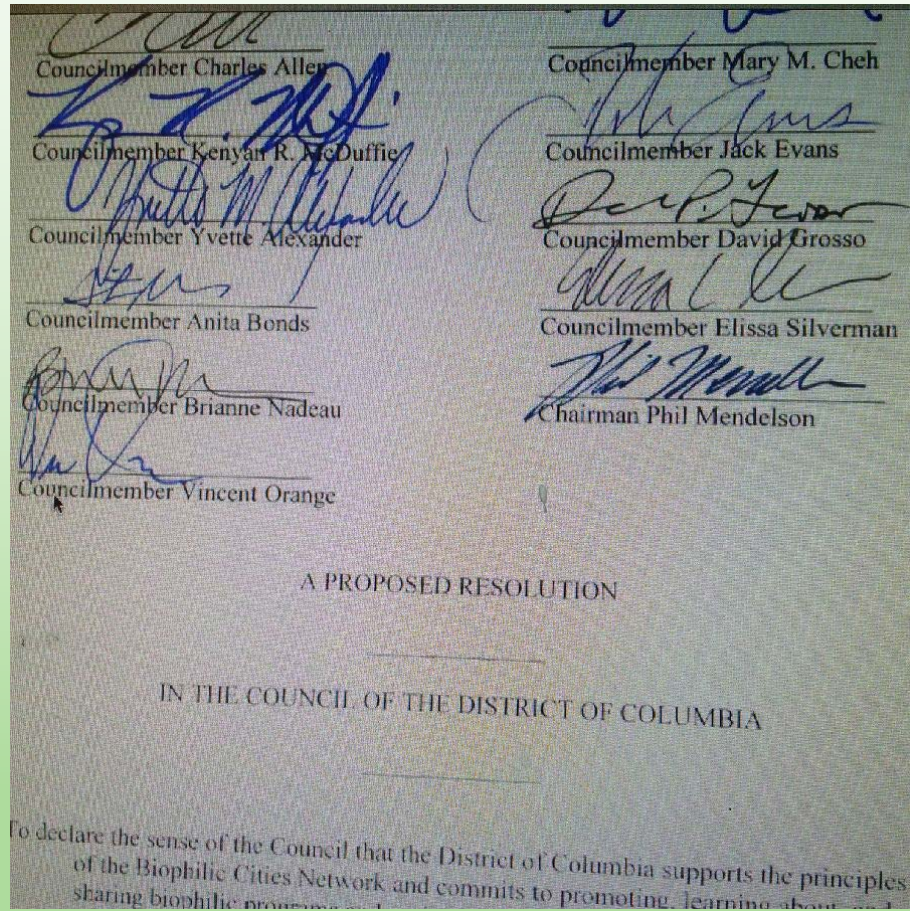
- **Vision.** We envision a Biophilic DC:
 - that supports the health and wellbeing of its people
 - whose residents—especially children—have equal access to nature all the benefits that entails, and
 - where the ecologies and species we share our city with thrive
- **How.**
 - Develop culture of engagement with nature
 - Partner and collaborate across disciplines to promote biophilic policies and practices – Pilot projects? Initiatives? Research?
 - Public sector engagement

Action





108
 Councilmemb
 Mary M. Cheh
 Ward 3
 Chairperson
 Committee on
 Transportation
 & the Environ



Councilmember Charles Allen
 Councilmember Mary M. Cheh
 Councilmember Kenyan R. McDuffie
 Councilmember Yvette Alexander
 Councilmember Anita Bonds
 Councilmember Brianne Nadeau
 Councilmember Vincent Orange
 Councilmember Jack Evans
 Councilmember David Grosso
 Councilmember Elissa Silverman
 Chairman Phil Mendelson

A PROPOSED RESOLUTION

IN THE COUNCIL OF THE DISTRICT OF COLUMBIA

To declare the sense of the Council that the District of Columbia supports the principles of the Biophilic Cities Network and commits to promoting, learning about, and sharing biophilic programs...

District of Columbia

Sense of the Council on Biophilic Cities

Resolution of 2015



To declare the sense of the Council that the District of Columbia supports the principles of the Biophilic Cities Network and commits to promoting, learning about, and sharing biophilic programs and projects with other participating municipalities, to supporting urban biodiversity, and to creating opportunities for all District residents to connect to nature.



BIOPHILIC CITIES | MAY 23 | 4:00 - 6:30PM

NATURE AT THE HEART OF UDC - STUDENT CENTER
DESIGN & PUBLIC POLICY | VAN NESS METRO

How can nature-based design and policy support biodiversity and human health in our city? Will a Biophilic DC be a more resilient DC?

Introduction by Prof. Tim Beatley
Followed by a discussion with
Director Tommy Wells, Dr. Sabine
O'Hara, Carl Elefante, Stella Tarnay

Award ceremony and celebratory
reception to follow.

BROUGHT TO YOU BY: BIOPHILIC DC
DC LIVING BUILDING CHALLENGE
UDC COLLEGE OF AGRICULTURE
URBAN SUSTAINABILITY & ENVIRONMENTAL SCIENCE
AIA DC - COMMITTEE ON ARCHITECTURE FOR EDUCATION
AIA DC - COMMITTEE ON THE ENVIRONMENT
DC ENVIRONMENTAL NETWORK



Image courtesy
of OMA + OLIN

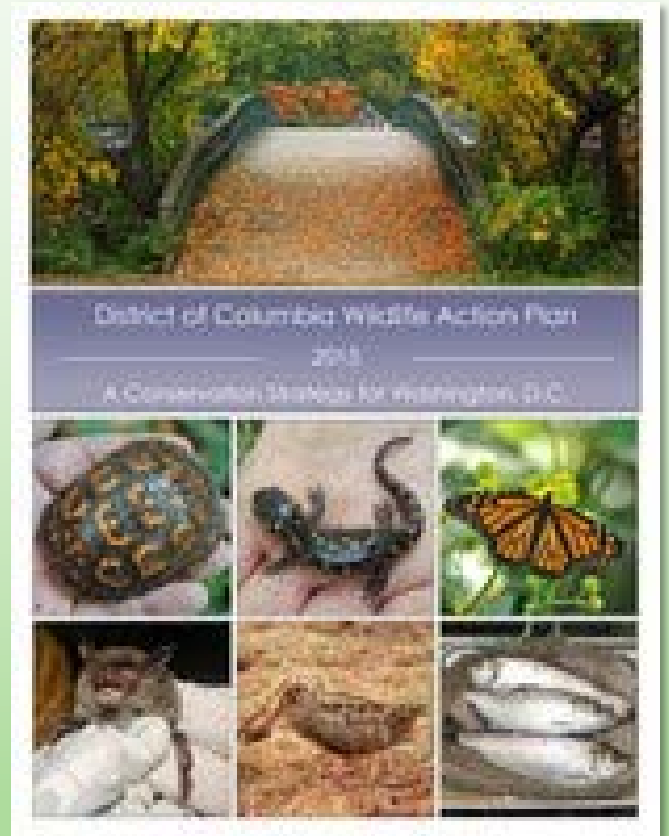
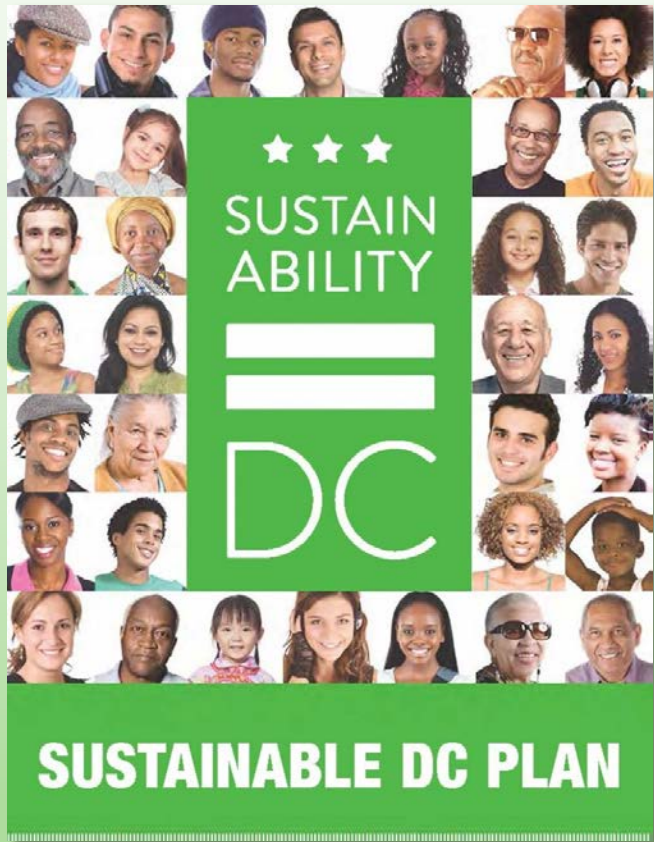


CLEAN ENERGY DC



★ ★ ★
WE ARE
WASHINGTON
DC





SAFETY
FOR
MIGRATING
BIRDS





RiverSmart Homes

Clean Water Starts in This Yard...and Yours!



Rain Barrel
Collects water from the roof to water the yard.



Rain Garden
Captures rain water and allows it to soak into the ground.

Biocscaping
Uses native plants that are drought resistant.



Permeous Pavers
Replaces impervious surfaces and reduce runoff.



Shade Trees
Shade and filter storm water, decrease heating and cooling costs.

Make your home RiverSmart to help reduce stormwater runoff, which will help the District's streams and rivers.



The RiverSmart Homes program is funded wholly, or in part, by the Government of the District of Columbia, District Department of the Environment, Watershed Protection Division.

For more information visit:
ddoe.dc.gov/riversmarthomes

RiverSmart
clean water starts here

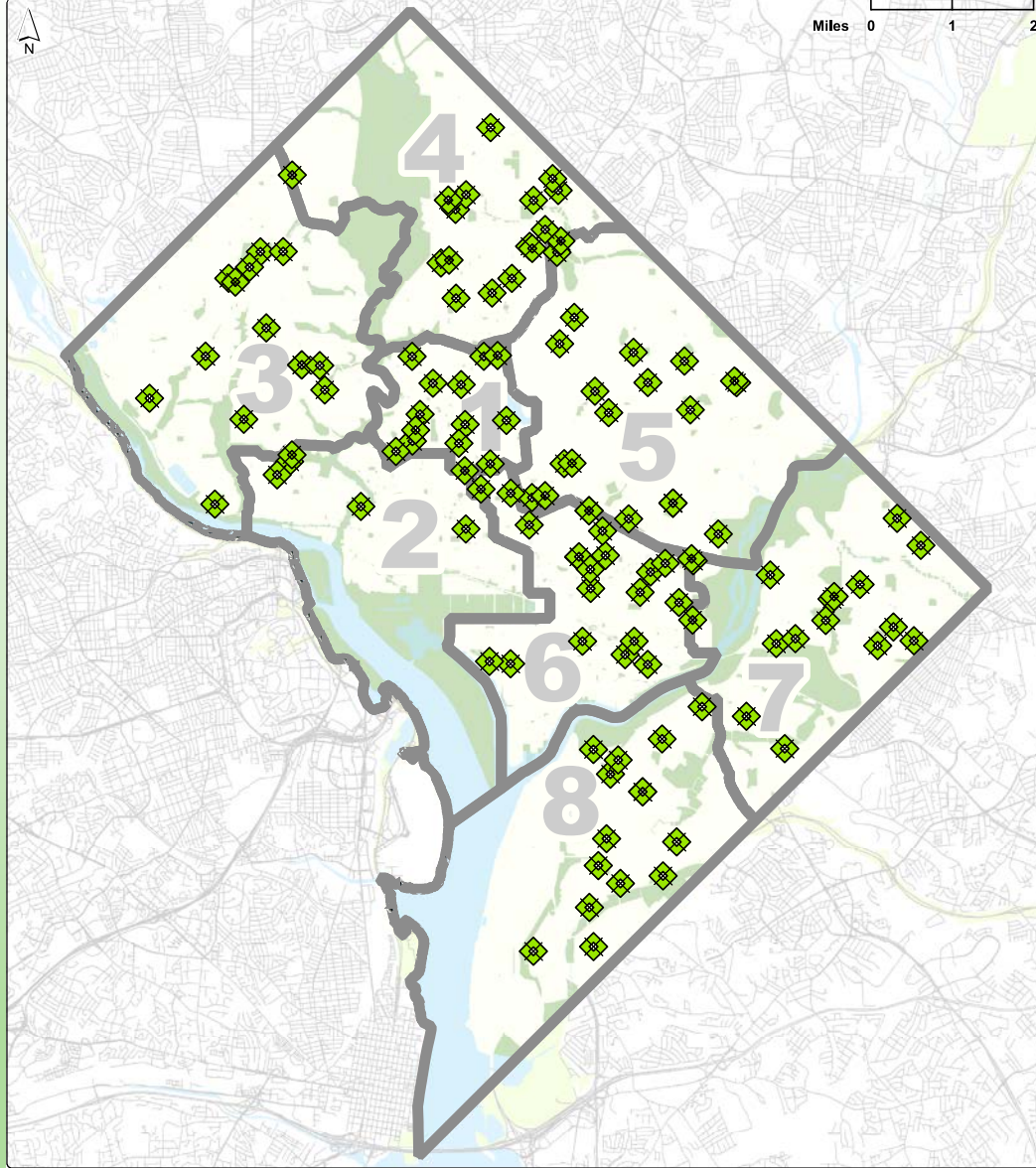


dc
water is life



Ludlow Taylor School

Natural Resources Design



- 2012 Wards
- Active School Gardens

ent. Information provided by other agencies should be verified with them where appropriate.

2016
National Park Service.
CENTENNIAL

NATIONAL
GEOGRAPHIC

bio blitz

National Parks Bioblitz • Washington, D.C.





















ParkRx

Who: every American! Date: _____

Rx: Nature time in your neighborhood park

Sig: as needed for physical, mental health

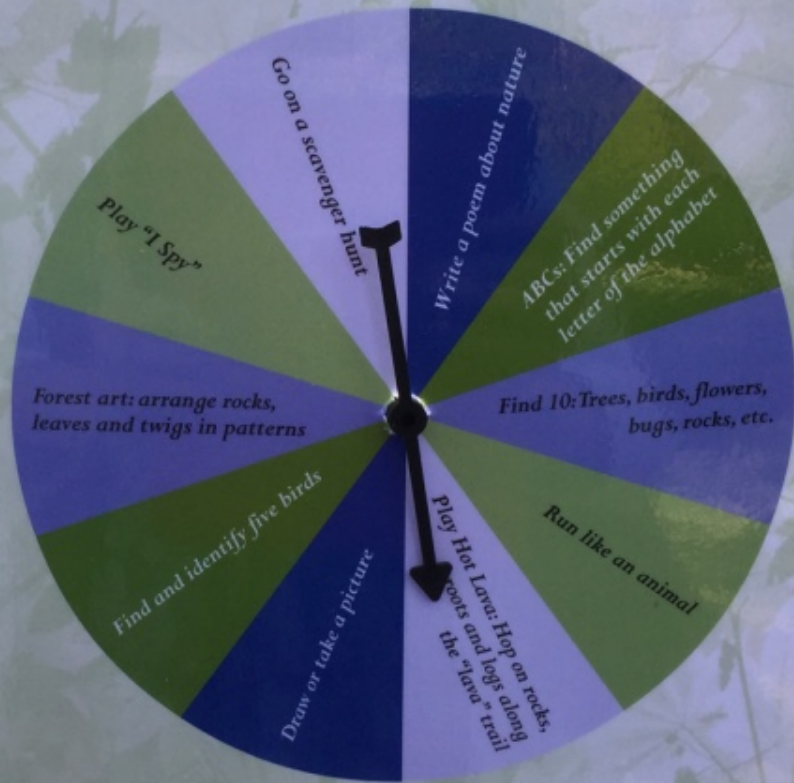
fill it on

National Park Rx Day

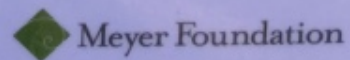
April 24

ParkRx.org

Find Yourself in Rock Creek



rockcreekconservancy.org



Mission: catalyze, purchase and sell PACE staff during the hours park not visible

Financial Information: 800.242.4111 Fax: 202.696.8200

Search Results: C=standard;page=1;page=1

MSB

U.S. Geological Survey 22' Quadrangle Index

Offer on the Rock Creek Park and Culture Center: Please Contact: (202) 696-8200 or (202) 696-8200









© Krista Schlyer/MeetYourNeighbours



Bruce Mc Neil, photographer



Biophilic DC Education Series: Learning from the Experts



Biophilic DC

AIA DC

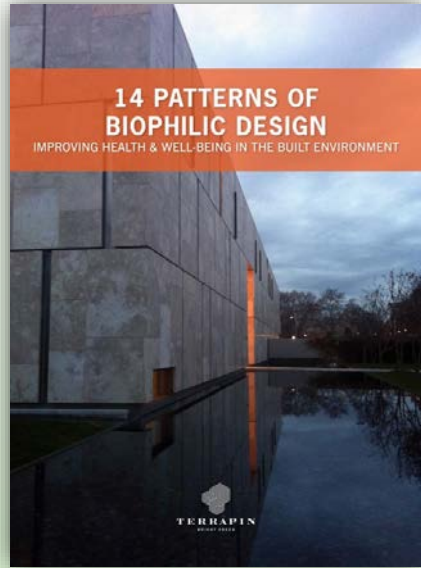
AIA
Design +
Wellbeing
DC

COTE^{A/DC}_{dc}

POTOMAC
ASLA

**Nature in the Heart of the City:
An Introduction to Biophilic Design**
Monday, Sept. 19th, AIA District Architecture Center

Bill will share the science behind healthy, nature-based spaces, including some great examples and key principles for designing biophilic buildings and spaces. This will be a great foundational program.



14 PATTERNS OF BIOPHILIC DESIGN

FOR HEALTH AND WELL-BEING IN THE BUILT ENVIRONMENT

NATURE IN THE SPACE

1. Visual Connection with Nature
2. Non-Visual Connection with Nature
3. Non-Rhythmic Sensory Stimuli
4. Access to Thermal & Airflow Variability
5. Presence of Water
6. Dynamic & Diffuse Light
7. Connection with Natural Systems

NATURAL ANALOGUES

8. Biomorphic Forms & Patterns
9. Material Connection with Nature
10. Complexity & Order

NATURE OF THE SPACE

11. Prospect
12. Refuge
13. Mystery
14. Risk/Peril

PHOTO COURTESY OF MICHAEL VAN DER STURM PLANNING ARCHITECTS, WITH A THANK YOU TO MICHAEL AND TERRAPIN BRIGHT GREEN



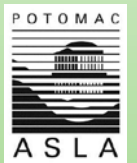
TERRAPIN
BRIGHT GREEN



Biophilic DC

AIA DC

COTE^{AWAC}_{dc}



Master Case Studies in Biophilic Design

Tuesday, June 20th, AIA District Architecture Center

COTE^{AIA|DC}
dc



AIA | DC

Biophilic DC

Integrated Land Use for Regenerative Cities

Monday, Nov. 7th
District Architecture Center



A Living Laboratory – UDC Green Roof Tour

Tuesday, May 9th

University of the District of Columbia



Biophilic DC



COTE^{MAIDC}_{dc}



Pecha Kucha: Biophilic Design in Washington DC

Monday, Feb. 27, 2017

IStudio



Biophilic DC



Native Bees – Protecting Our Urban Pollinators

Tuesday, April 18th
District Architecture Center

Learning from our Peers



bioPhilly



Climate & Urban
Systems Partnership

Learning from Philadelphia: Urban Habitat Mapping Charrette

Wednesday, Dec. 14th

National Geographic



“The ultimate goal is a habitat map for the entire city, which re-imagines Philly as a place of wild nature, habitat for a multitude of species living with and among us as humans.”

Learning from St. Louis





Learning from Singapore





Khoo Teck Puat (KTP) Hospital, Singapore

Pic: cpg consultants



Pic: tropicalenvironment.com



Learning from Edmonton



Learning from Austin



Learning from Each Other



Regional Citizen Science Gathering

March 15th, 2017

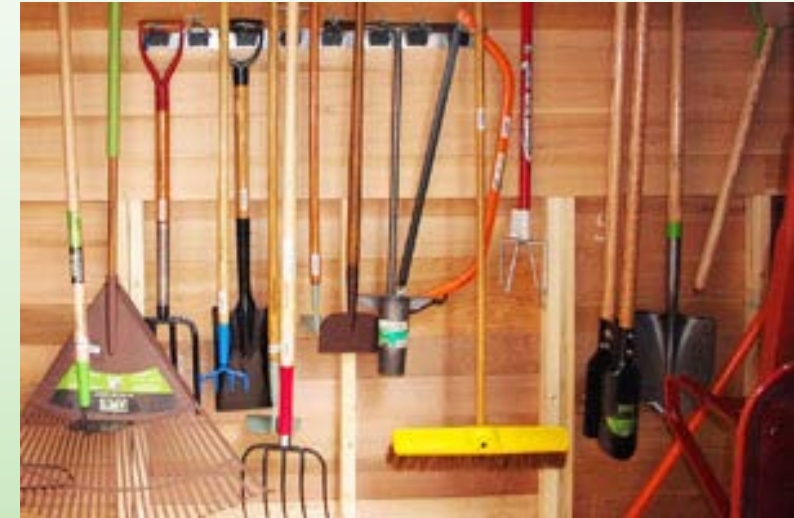
National Geographic











Arlington Reads; Arlington Grows!!

GARDEN TALK

WEDS. JUNE 19th

7pm INSIDE

SATURDAY
JUNE 22nd
9-NOON

TOP 10 GARDEN

VEGETABLE DISEASES

OPEN HOUSES

are coming!

7 locations
including
right here!

HANDOUTS
with MAP + LIST

UP-
COMING
Talks!

HANDOUTS
SPRING
GARDEN-
ING
+ MUCH







Learning from Urban Environment





Image courtesy of Bill Browning



Healing garden design for Walter Reed

HOK



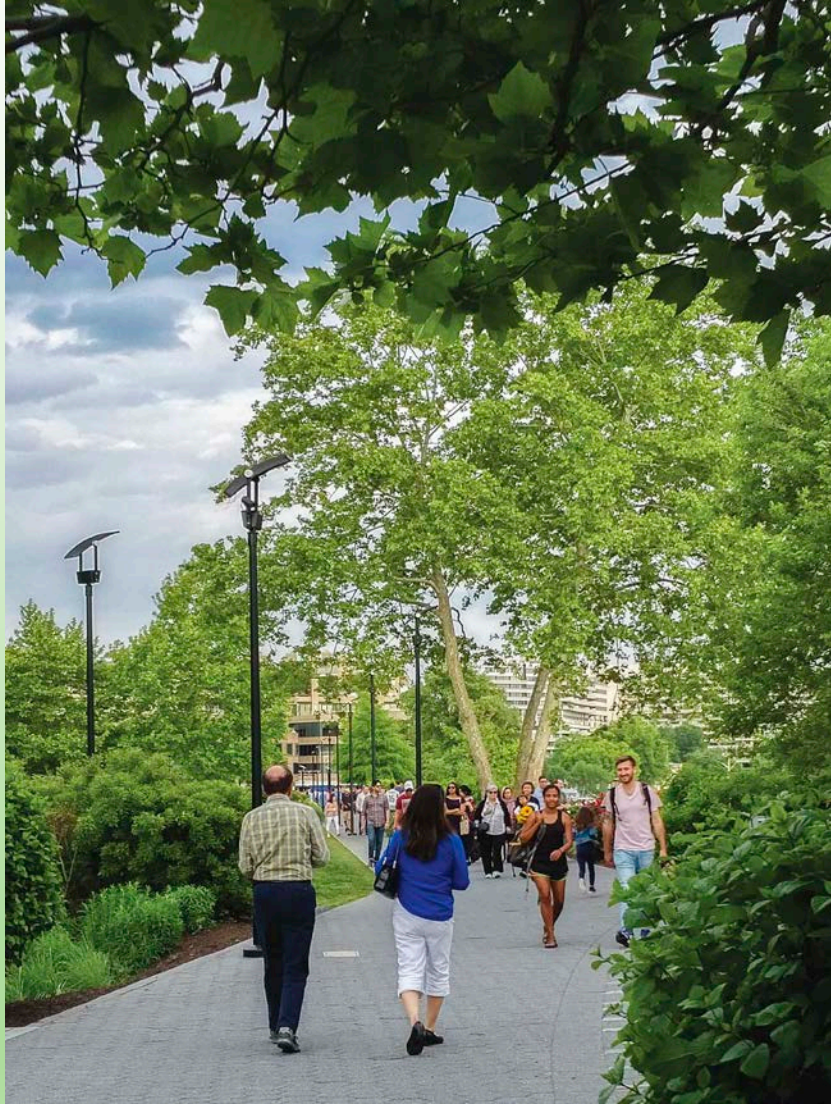


Bird Friendly Coffee Farm

11th Street
**BRIDGE
PARK**

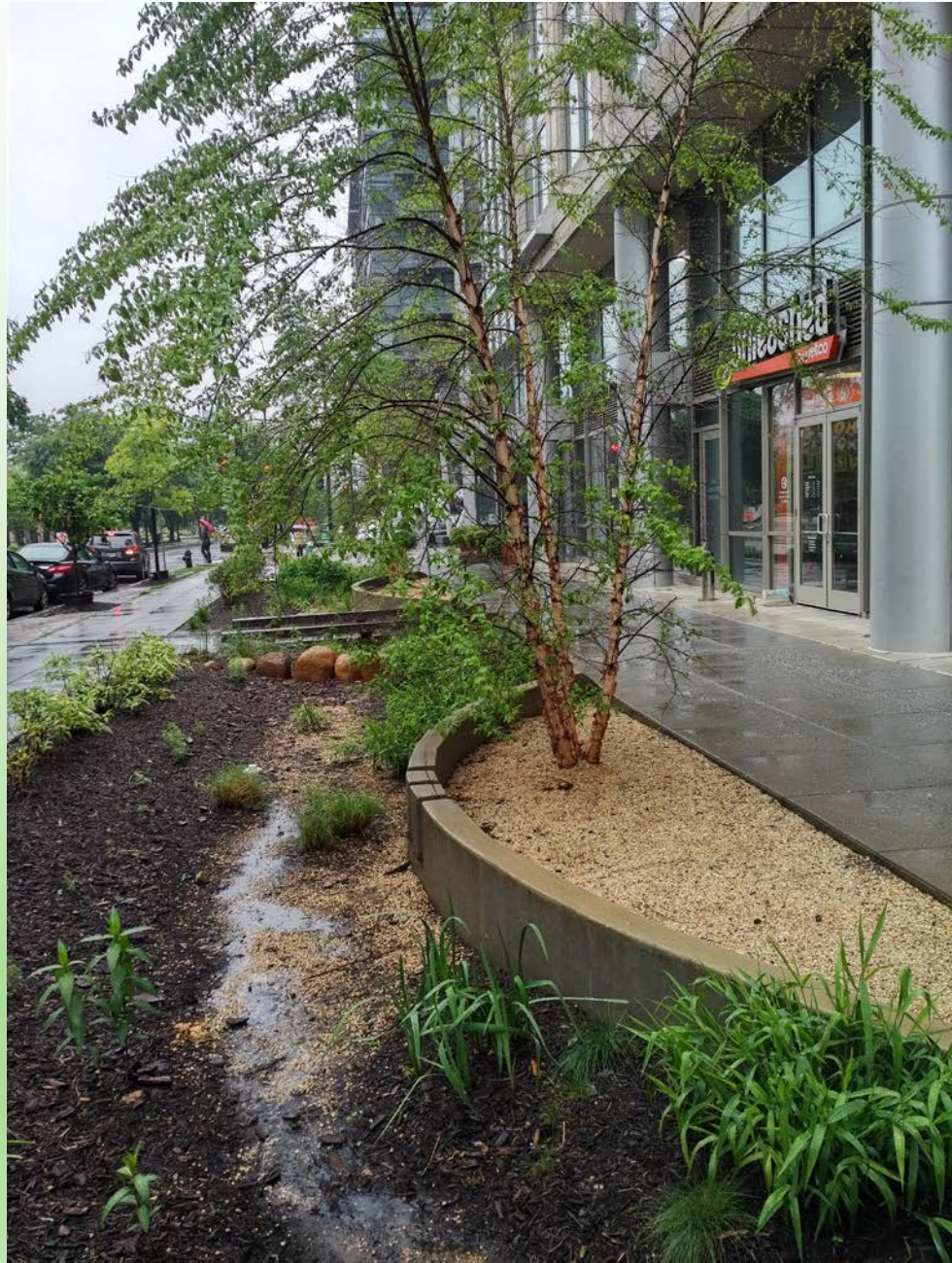




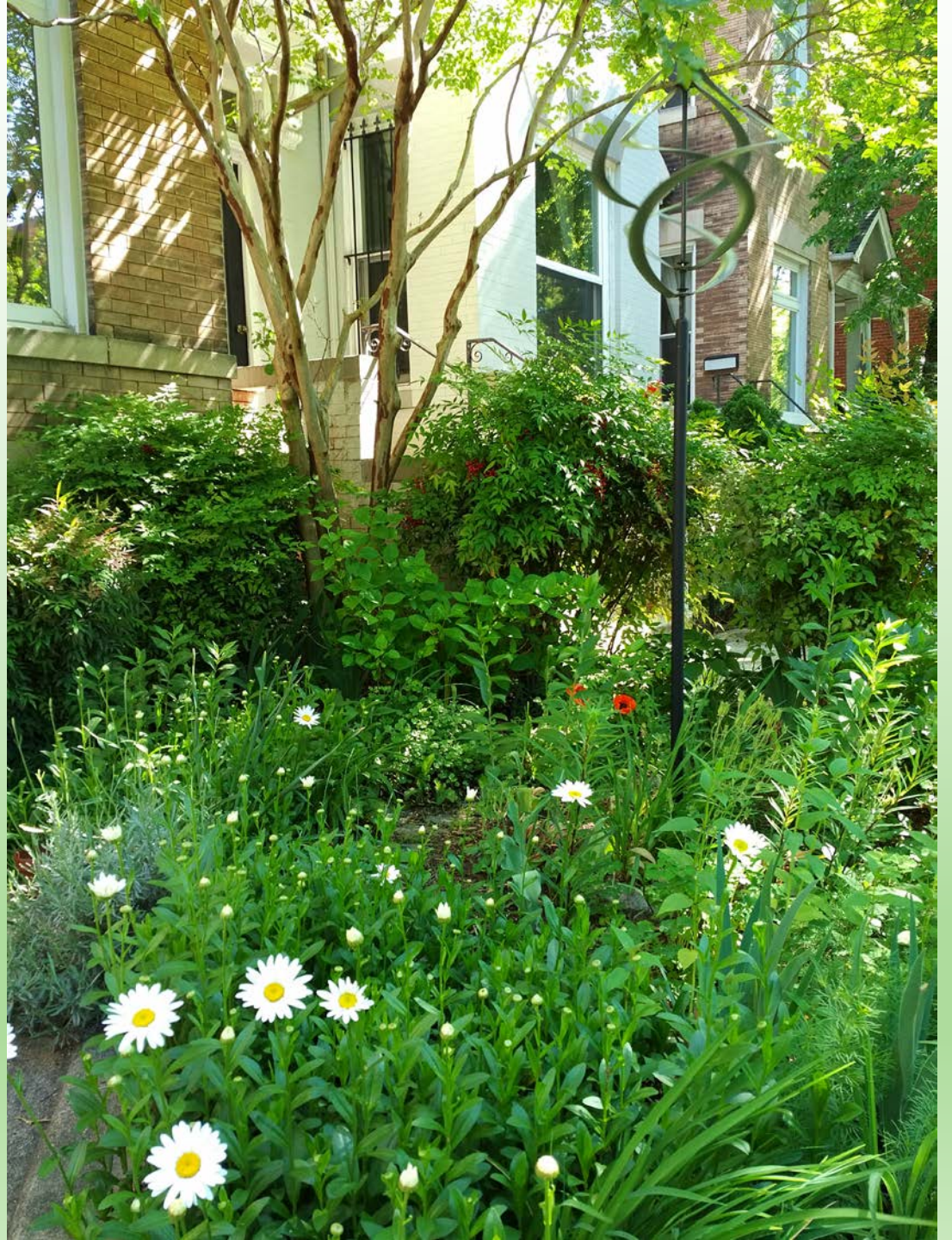
















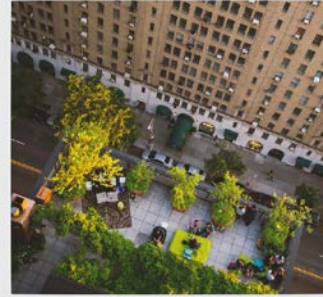
Melanie Choukas Bradley A Year in Rock Creek Park


Biophilic DC

Biophilic DC is a civic initiative that supports nature engagement and nature-based design for the wellbeing of DC's human residents—and the species we share our city with.



 Biophilic DC



 @BiophilicDC



 @biophilicdc

[#lovenaturedc](#)

Coming soon: www.biophilicdc.org

Contact: biophilicdc@gmail.com