

Education in City Gardens

Staying relevant in times of change



Cornell Botanic Gardens

Cornell University



Botanic Gardens Conservation International
August, 2018

Marianne Krasny
Cornell University
www.civicecology.org



Social change



Social change



Climate change



Climate change



CHICAGO BOTANIC GARDEN

Closed
Today

• information go botanic.



**How can botanic gardens
stay open—and relevant—
in a changing world?**

**How can botanic gardens
stay open—and relevant—
in a changing world?**

Social-environmental change



How can botanic gardens stay open—and relevant—in a changing world?



**Conservation
behaviors**

How can botanic gardens stay open—and relevant—in a changing world?



**Conservation
behaviors**



Organizational change

Botanic gardens: Staying relevant



Lynch, B. & S. Telfer (2015). *How can botanic gardens grow their social role?* London, UK, Calouste Gulbenkian Foundation



Botanic gardens: Staying relevant



Jessica Johns, Bristol Zoo Gardens





Outcomes

- Confidence
- Connection to nature
- Trust
- Social interactions across different backgrounds

We wanted to be able to talk about tree conservation and climate change but [it became clear] this is not necessarily what these groups want to talk about.

*Ben Oliver, Learning and Participation Manager,
Westonbirt, The National Arboretum*



Forestry Commission England

Lynch, B. and S. Telfer (2015). *How can botanic gardens grow their social role?* London, UK, Calouste Gulbenkian Foundation.

Outcomes

- *Most projects focused on social inclusion, not environmental issues.*



BCGI

Lynch, B. and S. Telfer (2015). *How can botanic gardens grow their social role?* London, UK, Calouste Gulbenkian Foundation.



Outcomes

- *Most projects focused on social inclusion, not environmental issues.*
- *They tended to avoid directly tackling ‘problematic’ environmental issues, such as climate change.*





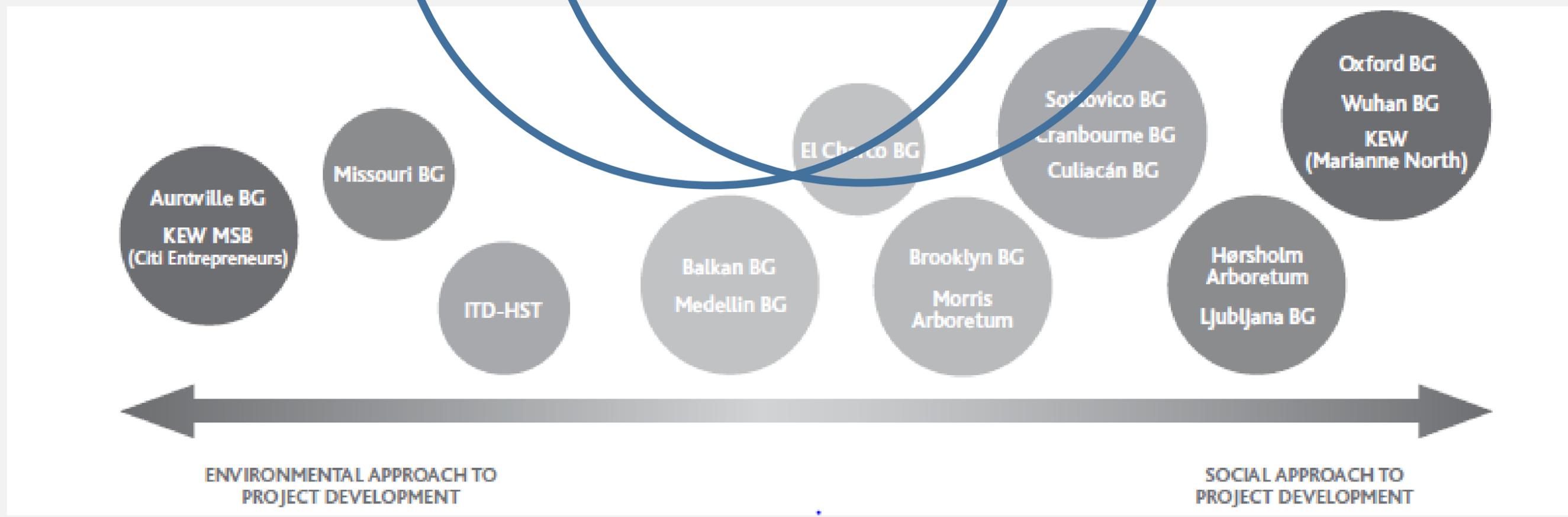
Outcomes

- *Most projects focused on social inclusion, not environmental issues.*
- *They tended to avoid directly tackling ‘problematic’ environmental issues, such as climate change.*
- *Bringing together social and environmental concerns remains a challenge.*





Cornell University



Derewnicka, L. Vergou, A. Moussouri, T.& Fernández Rodríguez, A. (2015) *Caring for your community: A manual for botanic gardens*. London, BCGI
Krasny, M.E. and K.G. Tidball (2015). *Civic Ecology: Adaptation and Transformation from the Ground Up*. MIT Press.

Civic Ecology Practice

local environmental stewardship actions

to enhance

green infrastructure

and

community well-being

**in cities and other human-dominated
systems**





A Russ





A Russ



Forest for Life



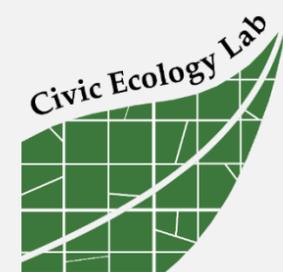


Rocking the Boat





Samar Deen





A Russ





Conservation



Social outcomes

- Confidence
- Connection to nature
- Trust
- Social interactions across different backgrounds



Self-efficacy

Beliefs about whether one's actions will achieve their individual or group goals.

Built through:

- Mastery experiences
- Role models
- Supportive social relations

*Civic Ecology / Communities in Nature:
Social outcomes*



Nature connection

Feeling of being connected
and belonging to the natural
community

Built through:
long-term, repeated, sensory
experiences in nature,
often with family members

*Civic Ecology / Communities in Nature:
Social outcomes*



A Russ



Sense of place

Feelings of attachment to a place and meanings attributed to a place.

Built through:

- Recreational activities
- Stewardship
- Citizen science and action research
- Unstructured time in nature

*Civic Ecology / Communities in Nature:
Social outcomes*



Social capital (trust, social connections)

Civic Ecology / Communities in Nature: Social outcomes

Trusting relationships and
cooperation for mutual benefit

Built through:

- Challenging cooperative activities coupled with support
- Fairness and open communication
- Community partnerships



Conservation



**Conservation behaviors
(e.g., green school designation)**



**Self-efficacy
Connection to nature
Sense of place
Social capital**



**Garden Activities
Civic Ecology
Practices**



Conservation



Conservation Behavior



Social Outcomes



**Garden Activities
Civic Ecology
Practices**



Conservation

Conservation Behavior

Social Outcomes

**Garden Activities
Civic Ecology
Practices**



Evaluation: How do we know?

Pre-post surveys

- Self-efficacy
- Connection to nature
- Sense of place
- Trust



A Russ

Sense of Place Survey

Place Attachment Scale

- The Bronx is the best place for what I like to do.
- I feel like the Bronx is part of me.

...

Ecological Place Meaning Scale

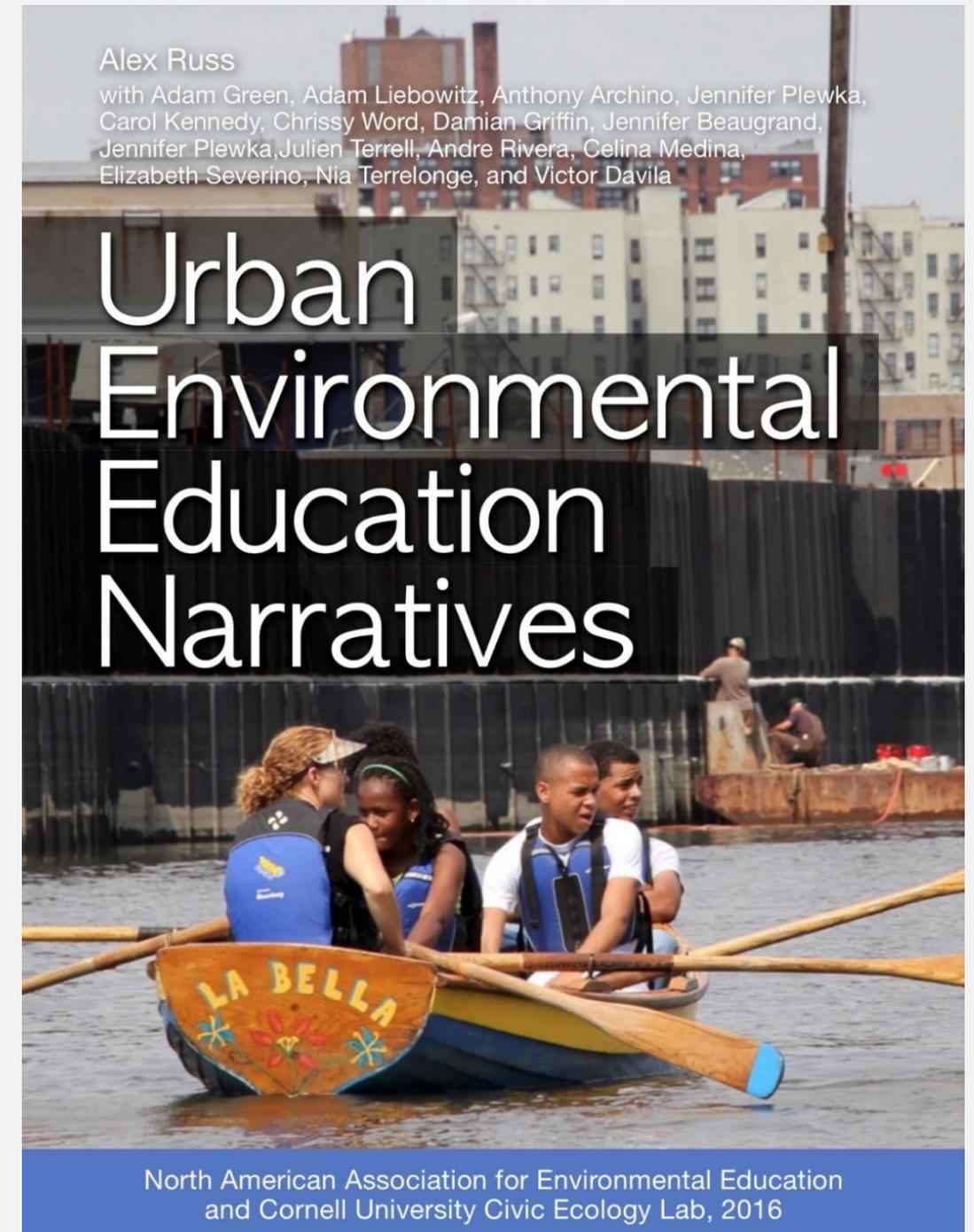
- The Bronx is a place to watch animals and birds.
- The Bronx is a place where people can find nature.
- The Bronx is a place to grow food.

...

Kudryavtsev, A., M.E. Krasny and R. Stedman (2012). *The impact of environmental education on sense of place among urban youth*. *Ecosphere* 3(4): 29.

Evaluation: How do we know?

Stories and narrative



Evaluation: How do we know?

Embedded evaluation

- photo elicitation



US Air Forces Central Command

Evaluation: How do we know?

Most Significant Change



“During the last month, what was the most significant change you experienced through participation in the program?”

Evaluation: How do we know?

Appreciate evaluation

- participant observation



J Delia

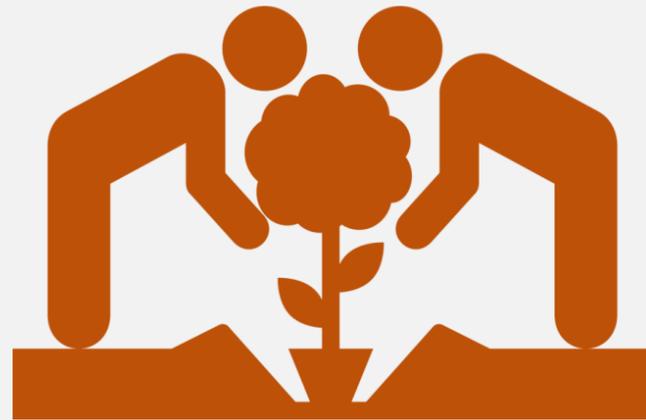
Delia, J. E. and M. E. Krasny (2018). *Cultivating Positive Youth Development, Critical Consciousness, and Authentic Care in Urban Environmental Education*. *Frontiers in Psychology* 8(2340).

How can botanic gardens stay open—and relevant—in a changing world?



**Conservation
behaviors**

How can botanic gardens stay open—and relevant—in a changing world?



**Conservation
behaviors**



Organizational change

Organizational change

- Default options
- Role models



Yue Li



M Krasny

Organizational change

- Greening vacant lots



LandCare Program



Pennsylvania Horticultural Society

Garvin, E., C. Cannuscio & C. Branas (2013). *Greening vacant lots to reduce violent crime: a randomised controlled trial*. *Injury Prevention* **19**(3): 198-203.

Organizational change

- Community engagement



Organizational change

- Community support post-disaster





**Social-
Environmental
Approach**

How can botanic gardens stay open—and relevant—in a changing world?



Conservation behaviors



Organizational change

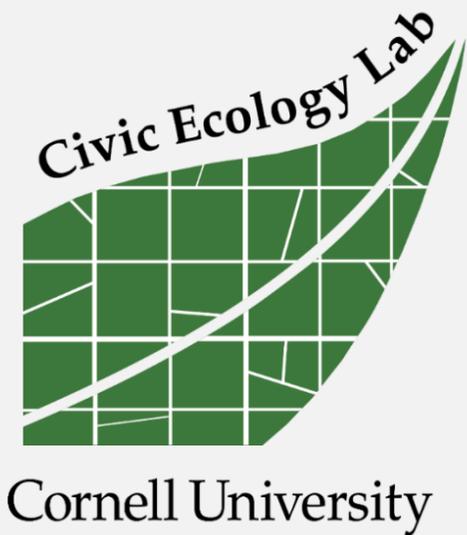
THANK YOU!

Alex Kudryavtsev
Bethany Jorgensen
Anne Armstrong
Yueyang Yu

Helen Miller



10th International Congress on Education in Botanic Gardens 2018



Marianne Krasny
mek2@cornell.edu
www.civicecology.org

