



# Assessing Citizen Contributions to Butterfly Monitoring in 2 Large Cities



MATTESON, K. C., TARON, D. J. and MINOR, E. S. (2012),  
Assessing Citizen Contributions to Butterfly Monitoring in  
Two Large Cities. *Conservation Biology*.

# + The Pollard Transect

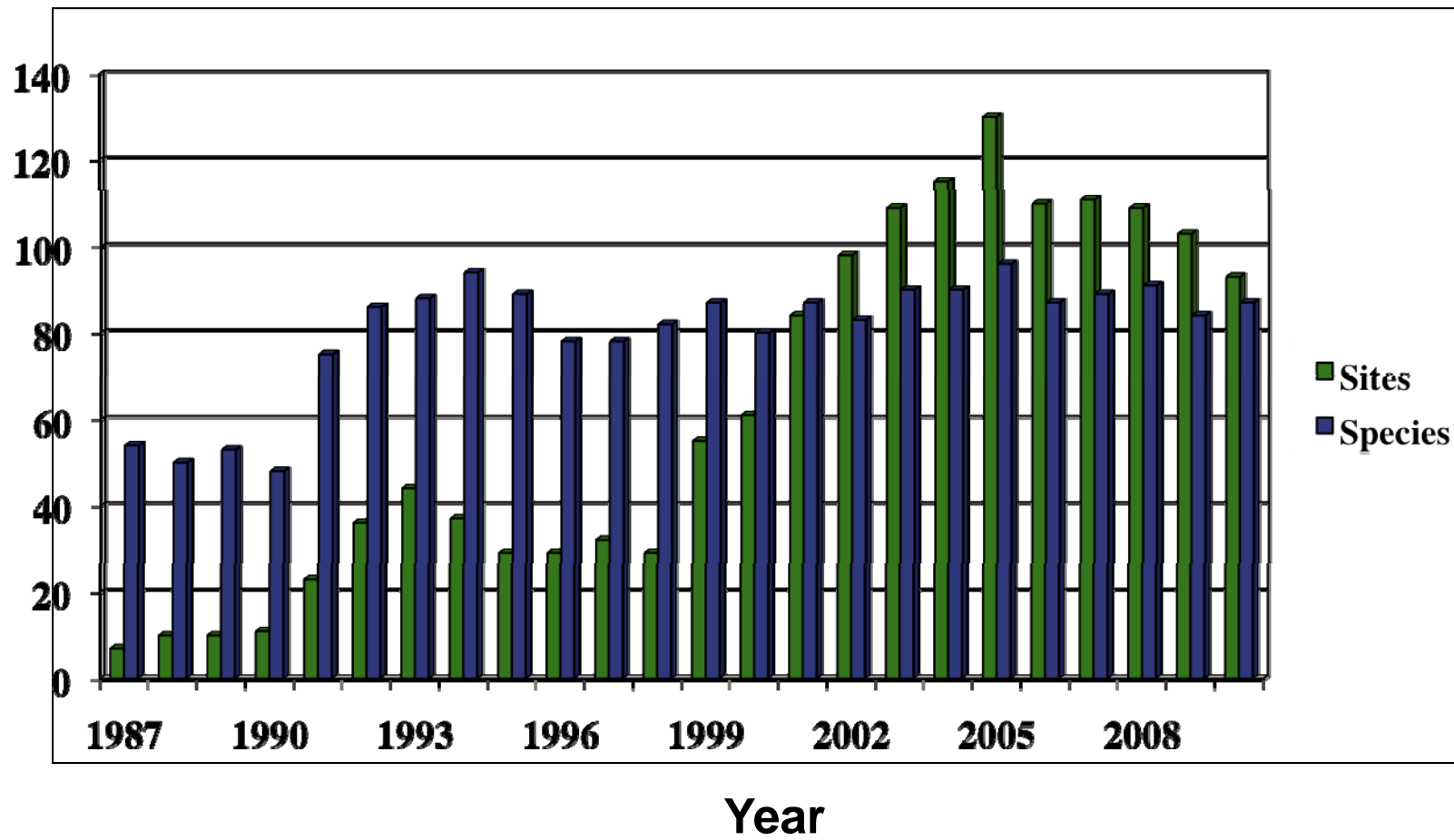
- A designated route
- Traverses major habitats/management units
- Walked at constant pace
- Butterflies within 20 ft of observer recorded
- Route walked at least 6 times each season



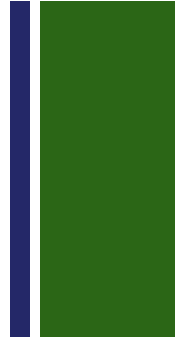
# + Census Route for Bluff Spring Fen



# How good is our species detection?



# + Comparing butterfly data in two large cities



- Compared ten years (2001 -2010)
- Chicago data from IBMN, NY data from NABA
- Chicago data from Cook County (56 km radius from Loop)
- NY data 56 km radius from Central Park
- Chicago uses Pollard transects, NY uses opportunistic reporting

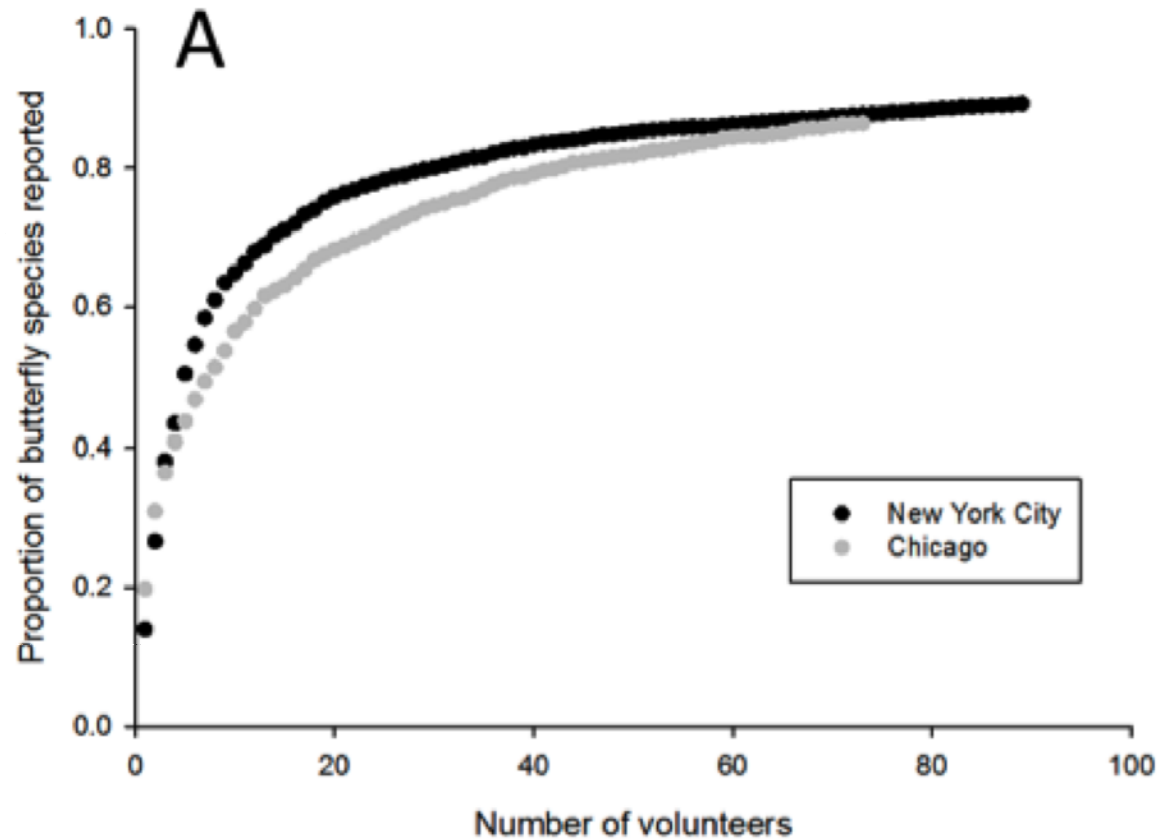
# + Summary Statistics for Chicago and NY



Measure	Chicago	New York	NY (Reduced)
Observers	73	89	44
Days	2240	1939	547
Locations	56	274	56
Months	3	12	3
Butterflies	101,533	118,005	42,614
Species	89	108	95
Expected Species <sup>a</sup>	103 (97)	121 (112)	121 (106)
Proportion <sup>a</sup>	0.86 (0.92)	0.89 (0.96)	0.79 (0.85)

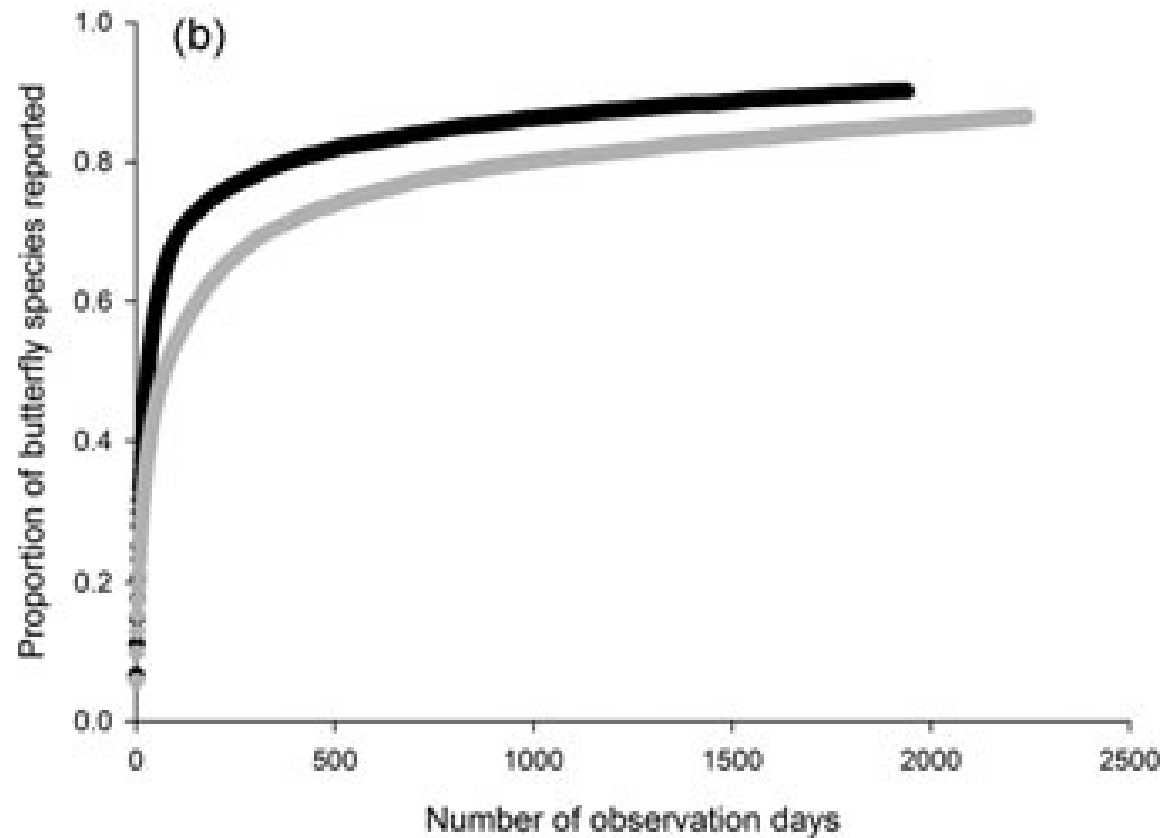
<sup>a</sup>Range Maps (Chao<sub>2</sub>)

# Cumulative proportion of regional total species



Matteson K.C., Taron, D.J., and Minor, E., 2012

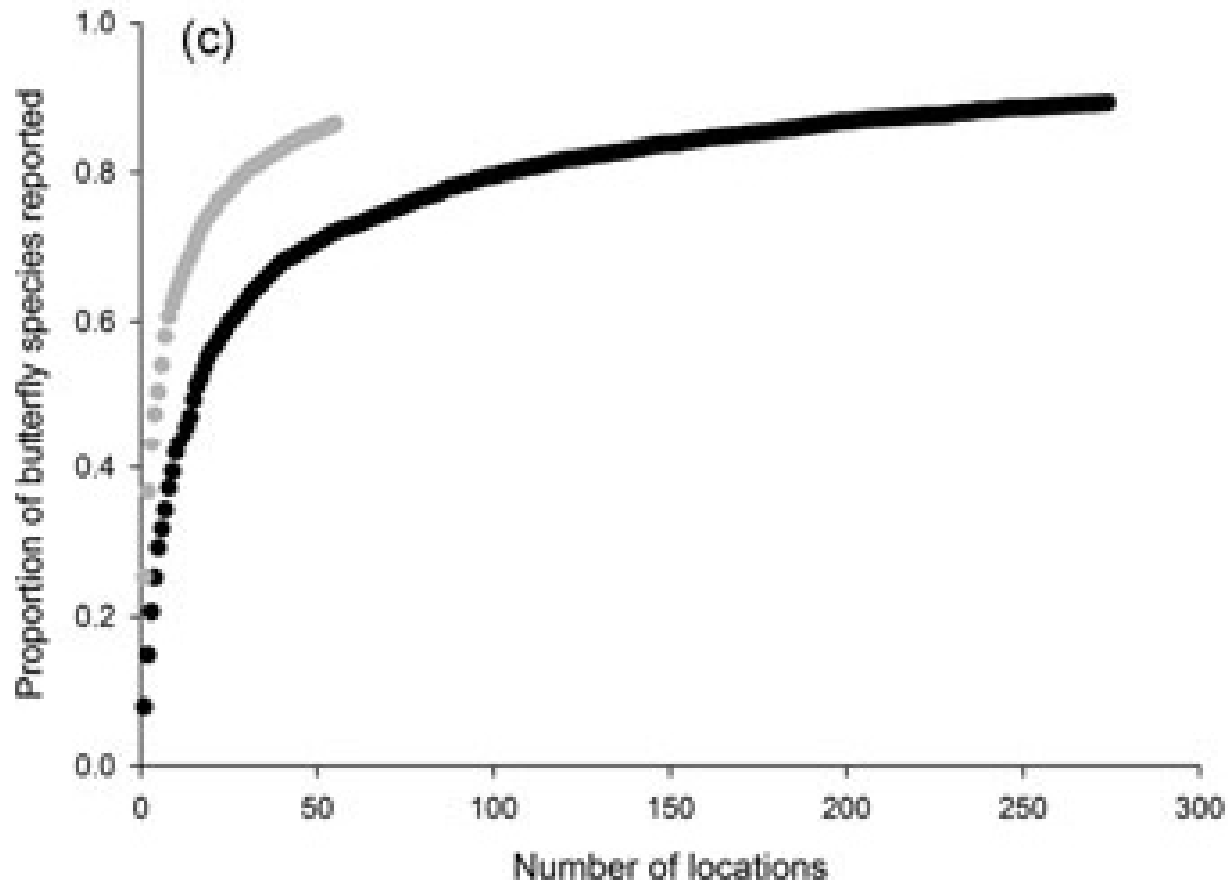
# Cumulative proportion of regional total species



Matteson K.C., Taron, D.J., and Minor, E., 2012

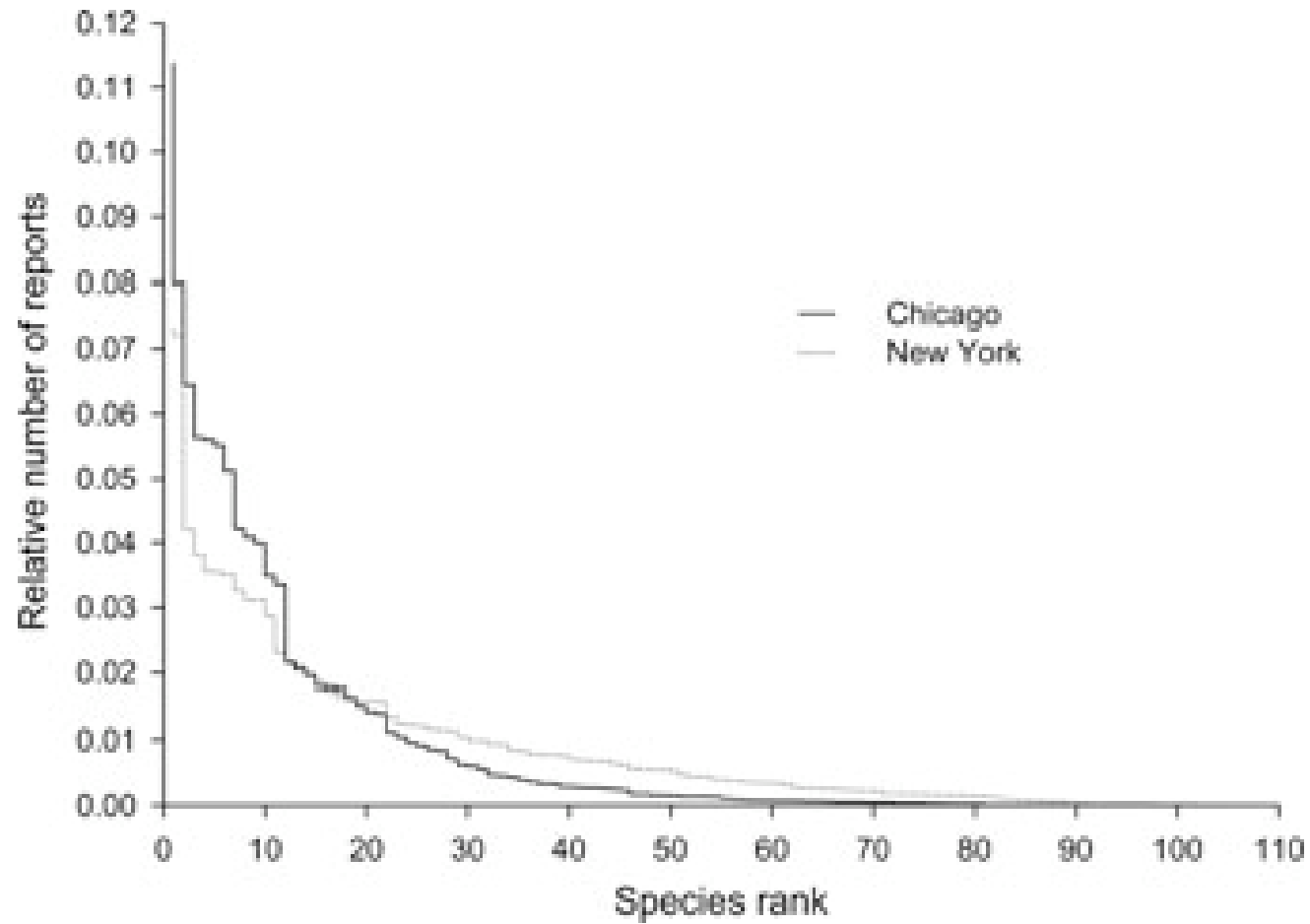


# Cumulative proportion of regional total species



Matteson K.C., Taron, D.J., and Minor, E., 2012

# Proportion of common to rare species



# + Do numbers reflect proportion of species' bundnce?



- Relatively more reports of rare species in New York data
- *Pieris rapae* most commonly reported in both cities
- 11.4% of Chicago records
- 7.3% of New York records
- (Giuliano et al. 2004) *P. rapae* accounted for 33% of records from New York city parks with standardized sampling protocols