Wisconsin River Floodplain Canopy Tree Metadata

CLASS I. DATA SET DESCRIPTORS

A. Data set identity: Distribution and abundance of canopy trees in floodplain forests of the Wisconsin River

B. Data set identification code: WIRF_trees.csv

C. Data set description

Principal Investigators: Monica G. Turner, Sarah E. Gergel, Mark D. Dixon, and James R. Miller

Abstract: These data were collected in order to investigate how physiography, flooding regime, landscape pattern, land-cover history and local soil conditions influence the presence, community structure and abundance of overstory trees. An additional research question was "Can broad-scale factors explain variation in floodplain forest community, or are locally measured soil conditions necessary?".

Key words: Bottomland hardwood, community composition, flooding regime, forest community, landscape ecology, land cover, large river, physiography, riparian, scale

CLASS II. RESEARCH ORIGIN DESCRIPTORS

A. Overall project description

For overview of the Wisconsin River Floodplain Project, please see plot-level metadata.

B. Specific subproject description

For information on site characeristics (e.g. site location, type, habitat, climate, geology etc.), please view Wisconisn River Floodplain Plot Metadata.

Sampling methods: We sampled vegetation in nine12- 20 km long study reaches. Reaches were chosen to be well distributed geographically; to avoid reservoirs, dams, and extensive area of urban river bank development; and to contain abundant, regularly flooded forest. In larger forest patches(at least 1.2 km wide), five sampling points were located at 125-m intervals along randomly established transects perpendicular to the main channel. Sampling points (usually one to three) were located at random in smaller forest patches and always separated by at least 125 m. We attempted to sample across the range of conditions (elevation, distance from river, patch size, past land use) that occurred throughout the floodplain, but we only sampled areas that were currently in forest cover. During summers of 1999 - 2001, we placed 10m x 20m sample plots (n=556). Each plot was located using a global

positioning system. We recorded whether the site was leveed or unleeved, and the location of the plot relative to the levee. All trees ≥ 2.5 cm diameter at breast height (DBH) were identified to species and the DBH recorded.

Taxonomy and systematics: Gleason, H. A. and Cronquist, A. 1991. Manual of vascular plants of northeastern United States and adjacent Canada, second edition, The New York Botanical Garden, New York. 910 pp.

Project personnel:

1999: Monica Turner (Co-PI), Emily Stanley (Co-PI), Mark D. Dixon, Sarah E. Gergel, James R. Miller, Ross Freeman, Jonathan West, Isaac Nadeau, Trish Roper, Hojeong Kang, Adrian Lesak, Michelle Luebke, Chris Hammes, Adam Narish

2000: Monica Turner (Co-PI), Emily Stanley (Co-PI), Mark D. Dixon, Sarah E. Gergel, James R. Miller, Jon West, Ross Freeman, Matthias Bürgi, Sally Tinker, Haven Livingston, Hojeong Kang, Angela Braun, Sara Rigelman, Katie Predick, Leah Bowe, Josh Sulman, Becky Nowak, Heather Arrowood, Aaron Thiel.

2001: Monica Turner (Co-PI), Emily Stanley (Co-PI), Mark D. Dixon, Sarah E. Gergel, James R. Miller, Jon West, Angela Braun, Kim Sash, Josh Sulman, Leah Bowe, Jaime Thibodeaux, Jen Fraterrigo, Amy Olson, Aaron Thiel, Mike Watt, Katie Predick.

CLASS III. DATA SET STATUS AND ACCESSIBILITY

For internal use only

CLASS IV. DATA STRUCTURAL DESCRIPTORS

A. Data Set File

Identity: WIRF_trees.csv

Size: 572 kb

Format and storage mode: ASCII text, comma delimited. No compression scheme was used.

Header information: See variable names in Section B.

Alphanumeric attributes: Upper and lower case

Missing value code: “.”

Authentication procedures: Column sums provided in table in Section B.

B. Variable information

Variable Name	Variable definition	Units	Storage Type	Range for Numeric Values	Column Sum
Reach	name of Wisconsin River reach	N/A	character	N/A	N/A
Transect	transect identifier	N/A	integer	N/A	N/A
Plot	plot identifier	N/A	character	N/A	N/A
Plotcode	unique number for each plot	N/A	integer	N/A	N/A
Year	year data recorded	N/A	integer	N/A	N/A
Marker Tree?	marker tree present? Yes or no	N/A	character	N/A	N/A
Species	Scientific name of species	N/A	character	N/A	N/A
Stems	number of stems	N/A	integer	N/A	N/A
DBH1	diameter at breast height	cm	Floating point	0-402	129562.59
DBH2	diameter at breast height	cm	Floating point	0-94.4	18710.23
DBH3	diameter at breast height	cm	Floating point	0-105.0	6786.5
DBH4	diameter at breast height	cm	Floating point	0-72.2	3100.3
DBH5	diameter at breast height	cm	Floating point	0-56.4	1817.4
DBH6	diameter at breast height	cm	Floating point	0-52.2	805
DBH7	diameter at breast height	cm	Floating point	0-49.4	493.2
DBH8	diameter at breast height	cm	Floating point	0-31.5	229.2
DBH9	diameter at breast height	cm	Floating point	0-32.4	131.5
DBH10	diameter at breast height	cm	Floating point	0-46.1	110