



**Figure B1.** The relationship between cumulative O<sub>3</sub> uptake (CUO) calculated using the methods presented in this paper and CUO published in the paper from which data were collected.

Ambient Air, Medium & High Confidence							
Data: Photosynthesis							
		n	Mean	p-value	Regression	r <sup>2</sup>	p-value
All Data		113	77.3	<0.001	65.95 + 0.56*x	0.08	0.002*
Plant Type							
	Crop	13	65.17	0.13	NS	0.004	0.83
	Evergreen Shrub	0	NA	NA	NA	NA	NA
	Grasses (C <sub>3</sub> and C <sub>4</sub> )	0	NA	NA	NA	NA	NA
	Herbaceous	0	NA	NA	NA	NA	NA
	Temperate Deciduous Tree	95	78.04	0.89	65.10 + 0.57*x	0.09	0.004*
	Temperate Evergreen Tree	4	90.2	0.008*	NS	0.04	0.8
	Tropical Tree	1	113.81	NA	NA	NA	NA
Plant Age (years)							
	< 1	28	69.88	0.19	83.13 - 1.21*x	0.19	0.02*
	1 – 5	55	83.03	0.46	65.36 + 0.63*x	0.09	0.02*
	> 5	30	73.74	0.49	NS	0.03	0.39
Exposure System							
	Greenhouse	0	NA	NA	NA	NA	NA
	Branch Chamber	12	71.06	0.38	103.62 - 3.01*x	0.65	0.001*
	Growth Chamber	44	63.18	0.005*	NS	0.01	0.53
	Open-top Chamber	12	61.67	0.03*	77.80 - 1.01*x	0.33	0.05 *
	Free-air Enrichment	0	NA	NA	NA	NA	NA
Rooting Environment							
	pot	56	68.55	0.07	NS	0.04	0.14
	ground	50	90.41	0.09	NS	0.04	0.19
Vulnerability							
	low	70	90.33	0.08	NS	0.06	0.07
	high	9	72.35	0.49	NS	0.04	0.59

**Table B1.** The number of data points (n), mean, regression, and statistics for photosynthesis when sorted by categories of plant type, plant age, O<sub>3</sub> exposure system, rooting environment, and vulnerability for all data that is compared to control plants exposed to ambient air with medium- or high-confidence in cumulative O<sub>3</sub> uptake (CUO) calculations. All means are reported as the percent of control treatment. The p-value for the overall dataset (All Data) designates whether the overall mean is significantly different from 100 (i.e. 0% change). The p-value for the mean within each category designates whether the mean of the category is statistically different from the mean of the overall dataset (All Data). All regressions are based on the correlation of photosynthesis to CUO for data within the category and are not included if the relationship is not significant (NS). The r<sup>2</sup> is calculated for each regression, and p-values designate whether the relationship between photosynthesis and CUO for data within the category is statistically significant. P-values are considered significant at p = 0.05, and significant values are indicated with \*.

Ambient Air, Medium & High Confidence							
Data: Conductance							
		n	Mean	p-value	Regression	r <sup>2</sup>	p-value
All Data		144	97.68	0.07	63.37 + 1.48*x	0.29	<0.001*
Plant Type							
	Crop	13	64.45	<0.001*	NS	0.007	0.79
	Evergreen Shrub	0	NA	NA	NA	NA	NA
	Grasses (C <sub>3</sub> and C <sub>4</sub> )	0	NA	NA	NA	NA	NA
	Herbaceous	0	NA	NA	NA	NA	NA
	Temperate Deciduous Tree	126	101.8	0.55	65.45 + 1.44*x	0.27	<0.001*
	Temperate Evergreen Tree	4	74.98	<0.001*	NS	0.08	0.71
	Tropical Tree	1	101.31	NA	NA	NA	NA
Plant Age (years)							
	< 1	33	74.93	<0.001*	NS	0.06	0.16
	1 – 5	81	113.66	0.07	67.23 + 1.49*x	0.26	<0.001*
	> 5	30	79.58	0.004*	NS	0.1	0.09
Exposure System							
	Greenhouse	0	NA	NA	NA	NA	NA
	Branch Chamber	12	88.18	0.16	NS	0.1	0.32
	Growth Chamber	49	66.46	<0.001*	59.00 + 0.87*x	0.08	0.05*
	Open-top Chamber	12	65.56	0.003*	NS	0.16	0.19
	Free-air Enrichment	0	NA	NA	NA	NA	NA
Rooting Environment							
	pot	67	73.64	<0.001*	61.21 + 0.97*x	0.16	<0.001*
	ground	70	125.28	0.003*	84.77 + 1.21*x	0.18	<0.001*
Vulnerability							
	low	87	116.78	0.02*	76.55 + 1.32*x	0.22	<0.001*
	high	9	54.57	0.002*	25.51 + 3.37	0.55	0.02*

**Table B2.** The number of data points (n), mean, regression, and statistics for stomatal conductance when sorted by categories of plant type, plant age, O<sub>3</sub> exposure system, rooting environment, and vulnerability for all data that is compared to control plants exposed to ambient air with medium- or high-confidence in cumulative O<sub>3</sub> uptake (CUO) calculations. All means are reported as the percent of control treatment. The p-value for the overall dataset (All Data) designates whether the overall mean is significantly different from 100 (i.e., 0% change). The p-value for the mean within each category designates whether the mean of the category is statistically different from the mean of the overall dataset (All Data). All regressions are based on the correlation of stomatal conductance to CUO for data within the category and are not included if the relationship is not significant (NS). The r<sup>2</sup> is calculated for each regression, and p-values designate whether the relationship between stomatal conductance and CUO for data within the category is statistically significant. P-values are considered significant at p = 0.05, and significant values are indicated with \*.