**Including ecology to particle capture mechanisms: The effects of oscillation on particle capture**

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The capture of suspended particles is an important biological process in terrestrial and aquatic ecosystems and includes pollen capture, suspension feeding and larval settlement. The standard model for examining particle capture is to examine particle deposition on stationary and rigid cylindrical ‘collectors’. This model does not, however, account for the dynamic movements that occur on collectors in natural systems, which are caused by winds and water currents. The oscillatory motion of these collectors may be characterized by their amplitude and frequency, which can vary in the longitudinal (parallel to the flow) and transverse (at right angles to the flow) directions. Previous computational fluid dynamic modeling in the lab suggests that the orientation of the oscillation may affect the capture efficiency of particles on moving collectors. Particle capture experiments were undertaken in a flow chamber at different velocities in which the magnitude, direction and frequency of the collector were controlled experimentally including the rigid condition for comparison to the standard model. The results of this experiment will be presented and discussed in the context of abiotic pollination and suspension feeding.