

Abstract Submitted  
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**The Effect of Raindrop Impact Location on the Dispersal Distance of Splash-Cup Plant Seeds**<sup>1</sup> JOSHUA WAH-BLUMBERG, BRETT KLAASSEN VAN OORSCHOT, RACHEL PEPPER, University of Puget Sound — Splash-cup plants use the kinetic energy from falling raindrops to disperse their seeds. Understanding the biomechanics of splash-cup plants could improve understanding of the evolution of splash-cup plants, provide insight into how foliar diseases are spread, and lead to developments in ink-jet printing technology. In nature, raindrops can impact splash cups in random locations on the cup. Previous studies found that the impact location of a raindrop on a splash cup has a significant effect on the dispersal distance of its seeds, but this relationship has not been studied systematically. We released water drops above 3D printed models of splash cups containing 1 or 5 glass seed mimics. We varied the drop impact location from the center of the cup to past the edge of the cup, and we measured the dispersal distance of the seed mimics. We found that the maximal dispersal distance occurs when the drop impact location is close to the edge of the cup but still inside of the cup. We also investigated the interplay of cup angle (the angle of the cone above the horizontal) and drop impact location on dispersal distance.

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