

Research at Los Osos: **Identification of dust-associated aeolian microbial communities in southern California (2015)**

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region are understudied, and we lack a comprehensive understanding of airborne microbial movement throughout the Salton Sea area. This is a critical research need, given that microbial community composition can affect ecosystem functioning and human health. The Aronson lab aims



Wind erodes the earth by two processes, deflation and abrasion. Dust deflation is the removal of fine particles by the wind. In southern California, dust deflation is exacerbated by the current drought conditions and may contribute to the aeolian wind-driven movement of biologically-significant microorganisms. Microbial communities associated with dust within this re-



to identify spatial and temporal patterns of bacteria and archaea present in dust collected throughout southern California, focusing on the Coachella and Imperial Valleys. Dust collectors (pictured) consisting of trays filled with marbles to collect dust will be set up at a number of sites throughout the region, including Dos Palmas Preserve and Oasis de los Osos, and samples will be collected on a monthly basis. Microbial DNA will be extracted from the dust samples and sequenced using an Illumina MiSeq platform. Results will be published in peer-reviewed journals and presented at regional and national academic conferences.