SEM-Based Morphological Analysis of *Schistocerca gregaria*: The Arizona Desert Locust

*Schistocerca gregaria*, commonly known as the Desert Locust, is an economically significant insect species with considerable implications for agriculture and ecological balance. The study of the morphology plays a vital role in understanding the nature of the intricate anatomical structures, and thus provides clues to the physiological processes within this species. In this study, we employ Scanning Electron Microscopy (SEM) to investigate the surface ultrastructure of *S. gregaria* at various magnifications.

A single specimen of *S. gregaria* was collected from its natural habitat in the Sonoran desert and prepared for SEM analysis using established protocols for dehydrating and mounting. Subsequently, the sample was sputter coated with a conductive layer of gold for SEM imaging.

The findings of this study contribute to the existing biological knowledge of the Desert Locust, and has implications for pest management strategies, as well as ecological studies related to its behavior and ecological interactions.

Keywords: Scanning Electron Microscopy, SEM, *Schistocerca gregaria*, Locust, ultrastructure, adaptations, functional morphology

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