

# **ECOLOGY AND MANAGEMENT OF GARDEN SYMPHYLANS (*Scutigerella immaculata* NEWPORT) IN WESTERN OREGON**

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Garden symphylans (*Scutigerella immaculata* Newport) are a key species in the predominantly phytophagous Symphyla family Scutigerellidae. *S. immaculata* have been economic pests of the roots and other below-ground plant parts in western OR since the 1920s. The omnivorous habits (100 hosts in Oregon) of *S. immaculata* confound management. Additionally, the ability of *S. immaculata* to persist in soils when no host is present by feeding on organic matter and other soil fauna perpetuates latent populations. All lifestages may be present at any time during the year in western Oregon and patchy distributions and vertical movement to a depth of over a meter in the soil complicate accurate population density estimation. Moreover, the loss and impending loss of many of the soil pesticides active against *S. immaculata* will likely lead to crop losses to latent populations in systems where *S. immaculata* damage is currently effectively minimized. To address current and impending crop losses, recent efforts have focused on improved *S. immaculata* management through 1) development and refinement of sampling methods 2) elucidation of the relationship between *S. immaculata* densities and crop health and 3) development of alternative methods of reducing damage such as crop rotation, tillage manipulation and conservation of natural enemies.