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URBAN RATS AND THE SMART CITY: A NEW PARADIGM FOR LANDSCAPE-LEVEL RAT MANAGEMENT

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Abstract. Dominant approaches to the management of urban rats have focused on identifying and treating infestations at the level of an individual building or parcel of land. Even the most up to date Integrated Pest Management (IPM) approaches do not often account for the spatial scale and dynamics of rat populations. The adoption of new 'Smart City' approaches into existing IPM frameworks offer great promise for improving citywide rat management. This talk will make the case for systematic, automated monitoring of rat populations to guide interventions to where they are most needed, as well as to provide a baseline for assessing success of management efforts. In addition to sensor-based automated data collection, this talk will address the use of new population genetic and landscape ecology approaches for managing urban rat populations. Given increasing concerns about pandemics and rat-borne pathogens, the importance of systematic microbial surveillance in rat populations will be also be discussed.