

List of Dissertation Abstract (Department of Natural Environment)

Name	Supervisor	Title	Abstract
Wang Xi	Sasaki Takehiro	Leaf Parasitism and the Epidemiological Triangle: Insights into Community Assembly and Urbanization in Wild Plant Communities	This dissertation shows how fungal pathogens and insect herbivores influence wild plant communities across Japan and China. Using field surveys and zero-inflated models, it reveals host specificity, seasonal effects, and urbanization impacts. Parasitism can stabilize or destabilize communities, with powdery mildew favored in cities. Findings highlight the epidemiological triangle's relevance for ecosystem management under urbanization and climate change.
Harsh Yadav	Sasaki Takehiro	Seed Fate: Understanding Animal-Mediated Seed Dispersal in Urban Ecosystems	Animal-mediated seed dispersal is a fundamental and critical ecosystem process for plants to colonize new locations. Endozoochory is one of the important modes of animal-mediated seed dispersal, which has been studied extensively for its contribution to biodiversity conservation and management. However, the rising impact of urbanization on biodiversity demands the assessment of its effect on the success of endozoochory in urban ecosystems. Therefore, this research work was designed to understand the fate of seeds and the role of urbanization in successful endozoochory. This research found a detrimental effect leading to seed dispersal disservice, where unchecked urban land cover is altering the endozoochorous interactions and reducing the success of seed dispersal.

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Seto Tomohiro	Sasaki Takehiro	Assessment and management of alien species for the conservation and restoration of primary vegetation on subtropical oceanic islands	This study examined management strategies for invasive species aimed at conserving and restoring primary vegetation on subtropical oceanic islands, focusing on the Ogasawara Islands. The expansion status of alien plant species was evaluated using species distribution models that incorporate spatial autocorrelation, and vegetation recovery following control projects was quantitatively assessed. In addition, the flora of rare plants on cliffs and landslide sites and the feeding preferences of <i>Rattus rattus</i> were clarified. The results indicate that setting priorities according to the stage of invasion and conducting continuous evaluation are essential for effective conservation measures.