

# Citizen science: Birders contribute valuable data on invasive plant species

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In an effort to assess ties between birds' feeding habits and the spread of nonnative invasive plants, researchers provided ornithologists from four U.S. states with questionnaires on daily bird-plant encounters. The 1,143 unique interactions reported by the birders laid the groundwork for a study on the role of native birds in the seed dispersal of invasive plants throughout the U.S.

Clare Aslan and Marcel Rejmánek of the University of California, Davis mailed questionnaires to more than 1,000 members of the Ornithological Societies of North America in the states of California, Florida, New York and Washington. The questionnaires addressed daily birding activities, experience level of the birder, bird-plant interactions and any additional comments. The answers were analyzed by the researchers and compared with pre-existing empirical data and/or follow-up field observations.

From the 179 birders who responded, the researchers gathered 1,143 interactions—of those interactions, 539 (47 percent) involved [birds](#) feeding on fruits or seeds of nonnative plants. As birds feed on seed-bearing fruit or the seeds of plants themselves, they inadvertently drop leftovers in nearby soil or carry them greater distances in their plumage. The birders' reports suggest that--through their feeding and habitat preferences--specific birds are contributing to the spread of certain nonnative invasive plant species.

"The spread of [invasive plants](#) is tricky to keep track of," said Aslan.

"Even if scientists are able to pin-point the site of introduction, it's very difficult to untangle the method, frequency and route of dispersal. In the case of fruit-eating migratory birds, this can be even more challenging as the seed dispersal is more widespread. The goal is to link specific birds with their new-found preferences for certain invasive plant species."

For example, the common North American bird the Yellow-rumped Warbler (*Dendroica coronata*) was reported to feed on the invasive Chinese tallow, glossy privet and European olive plants in California; the researchers later confirmed all three accounts through field observations. The survey analyses also identified 17 under-researched plant species of particular concern for invasion as they were observed to be frequented by birds; these reports provided scientists with research ideas.

"By gathering the daily observations of established ornithologists, we were able to locate a starting point for future studies," said Rejmánek. "We identified birds feeding on and nesting in plants introduced to the U.S., and we identified new plants that hadn't been considered for follow-up research before. Incorporating the findings from birdwatchers, we are able to prioritize research efforts and fill in some of the current knowledge gaps on the topic."

**More information:** Additional research on the role of birders in ecology will be presented at the Ecological Society of America's Annual Meeting in Pittsburgh, August 1-6, 2010.

Provided by Ecological Society of America

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