

SCIENTIFIC NOTE

FIRST ARIZONA RECORDS OF THE MULTICOLORED ASIAN LADY BEETLE, *HARMONIA AXYRIDIS* (PALLAS) (COLEOPTERA: COCCINELLIDAE)

Foley *et al.* (2009) presented first occurrence records of the multicolored Asian lady beetle, *Harmonia axyridis* (Pallas), for Montana and discussed the many roles this beetle may assume within the environment, from biological control (Koch 2003) to outright pest (Roy and Wajnberg 2008; Wagner and Van Driesche 2010). Poutsma *et al.* (2008) found a large portion of the global climate is suitable for establishment of the multicolored Asian lady beetle and the North American distribution matches this climate model closely. Since the first report of this insect in the United States in Louisiana in 1988 (Chapin and Brou 1991), the multicolored Asian lady beetle has expanded its range to include most of the contiguous United States (Koch *et al.* 2006) and this and recent publications (Foley *et al.* 2009; Hicks *et al.* 2010) leave only Labrador, Saskatchewan, and Wyoming having no records. Noting first occurrences of invasive species within a region is an important activity as it documents arrivals, provides a reference point from which to monitor impacts and dispersals, and informs control measures.

The web-based, citizen science, Lost Ladybug Project is documenting ranges, habitats, and range/habitat shifts for the North American Coccinellidae fauna via submitted photographs subsequently identified by experts and entered into a database (LLP 2009). As such, the Lost Ladybug Project represents a major reference for coccinellid occurrences, and the project includes one photographic record of a multicolored Asian lady beetle taken in a backyard in Yuma, Yuma County, Arizona, on 23 November 2008 by Mariah Arnold.

An additional specimen was captured during a blacklighting demonstration on the Prescott College campus in Prescott, Yavapai County, Arizona, on 22 August 2009 by KF. The specimen was one of only two insects that came to the light due to bad weather, and it has been deposited in the University of Arizona Insect Collection. Both specimens were identified using characters from Chapin and Brou (1991).

According to Carl Olson (Associate Curator, University of Arizona Insect Collection), multicolored Asian lady beetles were intentionally released in Continental, Arizona (Pima County) to help control aphids in pecan groves, but populations never became established. There is one specimen in the University of Arizona collection from such a release in

1994, but the two occurrences documented above are believed to represent the first records of multicolored Asian lady beetles in Arizona arriving on their own accord. Both records come from urban settings. The Yuma occurrence comes from a Sonoran Desert scrub habitat and the Prescott occurrence is in an oak/pine/juniper habitat. These occurrences are separated by 285 km and it is likely that other municipalities in Arizona may harbor the insect, as might other habitat types (*e.g.*, cottonwood riparian). Further study is required to document the extent of the multicolored Asian lady beetle's distribution in Arizona.

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