11.2 Host Preference and Suitability of Native North American Rutaceae for the Development of the Asian Citrus Psyllid, *Diaphorina citri* Kuwayama

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The Asian citrus psyllid, *Diaphorina citri* Kuwayama, a vector of citrus huanglongbing (greening disease), is now present in all citrus producing states in the USA and Mexico. It can reproduce on several plant species in the Rutaceae family; orange jasmine (*Murraya spp.*) and curry leaf (*Bergera koenigii*) are amongst its favored hosts. There are several indigenous Rutaceae species in North America and some (e.g., *Choisyia spp.*) are popular ornamentals. A study was therefore initiated to determine the suitability of some of these plants for the development of the psyllid using no-choice and choice experiments. *D. citri* was found to successfully colonize and reproduce on *Choisyia ternatea*, *C. arizonica*, and *Helietta baretata* in no-choice tests, but reverted back to its preferred hosts, orange jasmine and curry leaf, in choice tests. On some of the other plant species (e.g., *Amyris madrensis*, *A. texana*, and *Zanthoxylum fagara*), adult psyllids laid eggs that hatched, but no nymphal development was recorded beyond the first instar. No reproduction occurred on *Esenbeckia berlandieri*, *Ptelea trifoliata*, or *Casimiroa edulis*, although adult psyllids were able to survive on these species for several days.