First Report of *Prunus mume* Siebold & Zucc. as a Host of *Conotrachelus nenuphar* (Herbst) (Coleoptera: Curculionidae)

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NOTE

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Conotrachelus nenuphar (Herbst) (Coleoptera: Curculionidae), the plum curculio, is a weevil native to North America found east of the Rocky Mountains, ranging from southern Canada to northern Mexico (Chapman 1938). *Conotrachelus nenuphar* hosts are primarily restricted to the family Rosaceae (Rosales), including native hawthorn (*Crataegus* spp.) and plum (*Prunus* spp.) and adventive apple (*Malus* spp.), peach (*Prunus* spp.) and pear (*Pyrus* spp.) (Chapman 1938, Maier 1990, Jenkins et al. 2006a). *Conotrachelus nenuphar* is a key pest of peaches and plums in the southeastern United States (Yonce et al. 1995); in these crops oviposition scars can reduce fruit value and larval infestation can lead to entire fruit load rejections.

Prunus mume Siebold & Zucc. (Rosales: Rosaeae), the flowering or Japanese apricot, is native to China and is cultivated throughout Asia (Fang et al. 2006), where it is used in cooking and traditional medicine (Shi et al. 2009). *Prunus mume* was introduced into the United States as an ornamental tree in 1902 (U. S. Department of Agriculture 1905) and is noted for the pink blossoms it produces from December to February, depending on winter air temperature (Doi 2007). *Prunus mume* distribution in the United States is limited but has a potential planting range in USDA hardiness zones 6 through 8 (Gilman and Watson 2014). North America pests include aphids (Hemiptera: Aphidoidea), scales (Hemiptera: Coccoidea), spider mites (Acarina: Tetranychidae), and tent caterpillars (Lepidoptera: Lasiocampidae) (Gilman and Watson 1994). In this note we report that *C. nenuphar* infests the fruit of *P. mume* and can complete their development in the fruit, expanding the known host range of this pest.

Prunus mume trees were located on the edge of the North Carolina State University University Plaza (35.787128, -78.670927). Sixteen *P. mume* trees were planted along the edge of the University Plaza roughly 3 m apart. *Conotrachelus nenuphar* oviposition scars were first observed on 8 May 2015 and fallen fruit was subsequently collected through 27 May 2015. Collected fruit was held on 2 x 2 cm mesh wire suspended over moistened paper towel in plastic containers at 23° C. Emerging *C. nenuphar* larvae were collected daily and added to 946 ml glass jars (Ball Corporation, Broomfield, CO) filled with sterile, moistened potting soil (Sun Gro Horticulture, Agawam, MA). Jars were fitted with a cotton boll weevil trap top and incubated in complete darkness at 25° C. Jars were checked every other day for emerging insects.

A total of 416 fruit were collected in May 2015. *Prunus mume* fruit had mean pericarp width of 3.3 cm and an average of three *C. nenuphar* oviposition scars per fruit, with 13 scars being the greatest number per individual fruit. A total of 518 larvae emerged from fruit with an average mass of 0.0316 g. A total of 62

C. nenuphar adults emerged from jars, as well as six *Cholomyia inaequipes* Bigot (Diptera: Tachinidae) and 32 *Nealiolis* spp. (Hymenoptera: Braconidae), both of which are solitary endoparasitoids of *C. nenuphar* (Jenkins et al. 2006b).

This is the first report of *Prunus mume* as a host for *Conotrachelus nenpuhar.* As *C. nenuphar* hosts include several adventive members of the genus *Prunus,* including peaches and apricots, the association with *P. mume* is unsurprising. In North America, *Prunus mume* is cultivated primarily for ornamental purposes, thus infestation by *C. nenuphar* will not likely warrant management. However, *P. mume* may serve as an alternate host for *C. nenuphar* that could increase infestation of nearby economically important hosts, including backyard or hobbyist orchards. *Prunus mume* flowers very early in the growing season and may provide oviposition sites for *C. nenuphar* earlier than other hosts, accommodating its bivoltine lifecycle in southern regions (Chapman 1938) where *C. nenuphar* and *P. mume* distribution overlap. Whether this availability of *P. mume* fruit earlier than other hosts has significant impacts on *C. nenuphar* phenology is yet to be determined. Low adult *C. nenuphar* emergence was likely due to inadequate soil moisture for survival and development (Armstrong 1958).

Conotrachelus nenuphar and *Cholomyia inaequipes* specimens were deposited in the North Carolina State University Insect Museum; Department of Entomology and Plant Pathology, North Carolina State University, Raleigh, N.C. *Nealiolis* spp. specimens were deposited in the U.S. National Entomological Collection, National Museum of Natural History, Smithsonian Institution, Washington, D. C.

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