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Manzanitas (*Arctostaphylos* species) known to be susceptible to *Phytophthora ramorum*

(Many of the species listed below are not yet on the USDA APHIS *P. ramorum* proven host or associated host list.)

Arctostaphylos columbiana (bristly manzanita, hairy manzanita) – On the USDA APHIS *P. ramorum* associated host list. First reported in February 2006 by Rizzo, UC Davis (DiLeo et al. 2008). *Arctostaphylos columbiana* is native to the Pacific coast from northern California to British Columbia. Hairy manzanita is often available at native plant and horticultural nurseries.

Arctostaphylos glandulosa (Eastwood's manzanita) – First reported with *P. ramorum* symptoms on Mt. Tamalpais in June 2015 (Rooney-Latham et al. 2017). *Arctostaphylos glandulosa* is native to the Pacific coast from Baja California to southern Oregon, and includes eleven subspecies (*adamsii*, *atumescens*, *crassifolia*, *cushingiana*, *erecta*, *gabrielensis*, *glandulosa*, *howellii*, *juarezensis*, *leucophylla*, *mollis*). *Arctostaphylos glandulosa* subsp. *crassifolia* (Del Mar manzanita) is listed as rare, threatened, or endangered in California and elsewhere (CA RPR 1B.1). *Arctostaphylos glandulosa* subsp. *gabrielensis* (San Gabriel manzanita) is listed as rare, threatened, or endangered in California and elsewhere (CA RPR 1B.2) and as Sensitive Species for both Bureau of Land Management and U.S. Forest Service. Eastwood's manzanita is often available at native plant nurseries.

Arctostaphylos glauca (bigberry manzanita) – First reported as a *P. ramorum* host by Rooney-Latham and Blomquist, CDFA (publication in prep, 2020). *Arctostaphylos glauca* is native to California and Baja California, where it grows in chaparral and woodland ecosystems. Bigberry manzanita is often available at nurseries. Cultivars include 'Blue Corgi', 'Dwayne's Dwarf', 'Frazier Park Manzanita', 'Los Angeles', 'Margarita Pearl', 'Ramona'.

Arctostaphylos hooveri (Hoover's manzanita) – Symptomatic plants were first reported at the UC Santa Cruz Arboretum and Botanic Garden in 2017 by Garbelotto, UC Berkeley and Hall, UC Santa Cruz. *Arctostaphylos hooveri* is endemic to the Santa Lucia Range in Monterey and San Luis Obispo Counties. *Arctostaphylos hooveri* is listed as watch list, plants of limited distribution (CA RPR 4.3), and Sensitive Species for U.S. Forest Service. Hoover's manzanita is often available at native plant nurseries.

Arctostaphylos manzanita (common manzanita) – On USDA APHIS *P. ramorum* proven host list. Symptomatic plants were first reported from California (Davidson et al. 2003, Garbelotto et al. 2003). *Phytophthora ramorum* symptoms on *A. manzanita* include stem and branch cankers, foliar lesions and branch dieback. *Arctostaphylos manzanita* is endemic to the California Floristic Province, occurring from Baja California to northern California into Oregon, and includes six subspecies (*elegans*, *glaucescens*, *laevigata*, *manzanita*, *roofii*, *wieslanderii*). *Arctostaphylos manzanita* subsp. *elegans* (Konociti manzanita, CA RPR 1B.2) and *Arctostaphylos*

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manzanita subsp. *laevigata* (Contra Costa manzanita, CA RPR 1B.3) are listed as rare, threatened, or endangered in California and elsewhere. Common manzanita is often available at native plant and horticultural nurseries. Cultivars include 'Austin Griffiths', 'Bates' Yellow', 'Dr. Hurd', 'Hood Mountain', 'Monica', 'Sebastopol White', 'St. Helena', 'Vancouver Jade', 'Wood's Red'.

Arctostaphylos montaraensis (Montara manzanita) – Symptomatic plants were first reported as infected with *P. ramorum* in the 2017 SOD Blitz spring survey (Garbelotto, UC Berkeley pending publication), and again in July 2017 by Elizabeth Bernhardt and Ted Swiecki, Phytosphere Research and confirmed by CDFa. Bernhardt and Swiecki noted that the infected plants were not near California bay laurel (*Umbellularia californica*), suggesting that *P. ramorum* was sporulating on *A. montaraensis*. *Arctostaphylos montaraensis* is endemic to San Mateo County, and listed as rare, threatened, or endangered in California and elsewhere (CA RPR 1B.2). Montara manzanita is often available at native plant nurseries.

Arctostaphylos montereyensis (Monterey manzanita, Toro manzanita) - Symptomatic plants were first reported at the UC Santa Cruz Arboretum and Botanic Garden in 2017 by Garbelotto, UC Berkeley and Hall, UC Santa Cruz. *Arctostaphylos montereyensis* is endemic to Monterey County, and listed as rare, threatened, or endangered in California and elsewhere (CA RPR 1B.2), and as Sensitive Species for Bureau of Land Management. Monterey manzanita is often available at native plant nurseries.

Arctostaphylos morroensis (Morro manzanita) - Symptomatic plants were first reported at the UC Santa Cruz Arboretum and Botanic Garden in 2017 by Garbelotto, UC Berkeley and Hall, UC Santa Cruz. *Arctostaphylos morroensis* is endemic to San Luis Obispo County. *Arctostaphylos morroensis* is listed as rare, threatened, or endangered in California and elsewhere (CA RPR 1B.1), and Federally Threatened. Morro manzanita is often available at native plant nurseries.

Arctostaphylos pallida (Alameda manzanita, Oakland hills manzanita, pallid manzanita) – Symptomatic plants were first reported in 2017 as infected with *P. ramorum* on East Bay Regional Parks lands (Swiecki and Bernhardt, Phytosphere Research) and in a native plant nursery by CDFa (Rooney Latham et al., *in prep* 2020). *Arctostaphylos pallida* is endemic to the hills of Alameda and Contra Costa Counties and listed as rare, threatened, or endangered in California and elsewhere (CA RPR 1B.1), California Endangered, and Federally Threatened. Pallid manzanita has limited availability at native plant nurseries.

Arctostaphylos peninsularis (Peninsular manzanita) – First reported as a *P. ramorum* host by Rooney-Latham et al., CDFa (publication *in prep*, 2020). *Arctostaphylos peninsularis* is endemic to Baja California, and includes two subspecies (*juarezensis*, *peninsularis*). Peninsular manzanita is often available at native plant nurseries.

Arctostaphylos pilosula (La Panza manzanita, Santa Margarita manzanita) - Symptomatic plants were first reported at the UC Santa Cruz Arboretum and Botanic Garden in 2017 by Garbelotto,

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UC Berkeley and Hall, UC Santa Cruz. *Arctostaphylos pilosula* is endemic to San Luis Obispo County. *Arctostaphylos pilosula* is listed as rare, threatened, or endangered in California and elsewhere (CA RPR 1B.2). Santa Margarita manzanita is often available at native plant nurseries.

Arctostaphylos pumila (dune manzanita, sandmat manzanita) - Symptomatic plants were first reported at the UC Santa Cruz Arboretum and Botanic Garden in 2017 by Garbelotto, UC Berkeley and Hall, UC Santa Cruz. *Arctostaphylos pumila* is endemic to coastal Monterey County. *Arctostaphylos pumila* is listed as rare, threatened, or endangered in California and elsewhere (CA RPR 1B.2). Sandmat manzanita is often available at native plant and horticultural nurseries. Cultivars include 'Wavelength'.

Arctostaphylos rainbowensis (Rainbow manzanita) – *P. ramorum* infected plants were found in a botanic garden in Alameda Co. and confirmed by Rooney-Latham et al. at CDFA (publication *in prep* 2020). This host was previously communicated in the Nov. 2017, COMTF newsletter. *Arctostaphylos rainbowensis* is endemic to northern San Diego and southern Riverside Counties. *Arctostaphylos rainbowensis* is listed as rare, threatened, or endangered in California (CA RPR 1B.1). Rainbow manzanita is often available at native plant nurseries.

Arctostaphylos silvicola (Bonny Doon manzanita, silverleaf manzanita) – Symptomatic plants were first reported at the UC Santa Cruz Arboretum and Botanic Garden in 2017 by Garbelotto, UC Berkeley and Hall, UC Santa Cruz. *Arctostaphylos silvicola* is endemic to the Santa Cruz Mountains of southern Santa Cruz County and is listed as rare, threatened, or endangered in California (CA RPR 1B.2). Bonny Doon manzanita is often available at native plant nurseries. Cultivars include 'Ghostly'.

Arctostaphylos uva-ursi (kinnikinnick, bearberry) – On the USDA APHIS *P. ramorum* associated host list. First reported in January 2007 by the Washington State Department of Agriculture, Plant Pathology and Molecular Diagnostics Laboratory, Olympia, WA. Common in North America and available from native plant and horticultural nurseries. One of the most popular groundcover manzanitas and cultivars include 'Emerald Carpet', 'Green Supreme', 'Lilian', 'Massachusetts', 'Point Reyes', 'San Bruno Mountain', and 'Wood's Compact'.

Arctostaphylos virgata (Bolinás manzanita, Marin manzanita) – First reported as a *P. ramorum* host in June, 2015 (Rooney-Latham et al. 2017). *Arctostaphylos virgata* is endemic to Marin County. *Arctostaphylos virgata* is listed as rare, threatened, or endangered in California (CA RPR 1B.2). Marin manzanita is often available at native plant nurseries.

Arctostaphylos viridissima (white-haired manzanita, McMinn's manzanita) – Confirmed as a *P. ramorum* host by Rooney-Latham et al. CDFA (publication *in prep*, 2020). *Arctostaphylos viridissima* is endemic to Santa Cruz Island (Santa Barbara County). *Arctostaphylos viridissima* is listed as watch list, plants of limited distribution (CA RPR 4.2). White-haired manzanita is often available at native plant nurseries. Cultivars include 'White Cloud'.

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Arctostaphylos viscida (sticky whiteleaf manzanita) – Confirmed as a *P. ramorum* host by Rooney-Latham et al. CDFA (publication *in prep*, 2020) in a botanic garden. *Arctostaphylos viscida* is endemic to the California Floristic Province, occurring from the southern Sierra Nevada of California to southern Oregon, and includes three subspecies (*mariposa*, *pulchella*, *viscida*). Common in California, available from native plant and horticultural nurseries.

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