

Family: *Malvaceae*

Taxon: *Berrya cubensis*

Synonym: *Carpodiptera ameliae* Lundell
Carpodiptera cubensis Griseb. (*basionym*)

Common Name: Mountain-Pear
Telcon

Questionnaire Status:	current 20090513 Assessor Approved	Assessor:	Chuck Chimera	Designation: L
Data Entry Person:		Chuck Chimera		WRA Score -1
101	Is the species highly domesticated?	y=-3, n=0	n	
102	Has the species become naturalized where grown?	y=1, n=-1		
103	Does the species have weedy races?	y=1, n=-1		
201	Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"	(0-low; 1-intermediate; 2-high) (See Appendix 2)	High	
202	Quality of climate match data	(0-low; 1-intermediate; 2-high) (See Appendix 2)	High	
203	Broad climate suitability (environmental versatility)	y=1, n=0	n	
204	Native or naturalized in regions with tropical or subtropical climates	y=1, n=0	y	
205	Does the species have a history of repeated introductions outside its natural range?	y=-2, ?=-1, n=0	n	
301	Naturalized beyond native range	y = 1*multiplier (see Appendix 2), n= question 205	n	
302	Garden/amenity/disturbance weed	n=0, y = 1*multiplier (see Appendix 2)	n	
303	Agricultural/forestry/horticultural weed	n=0, y = 2*multiplier (see Appendix 2)	n	
304	Environmental weed	n=0, y = 2*multiplier (see Appendix 2)	n	
305	Congeneric weed	n=0, y = 1*multiplier (see Appendix 2)	n	
401	Produces spines, thorns or burrs	y=1, n=0	n	
402	Allelopathic	y=1, n=0	n	
403	Parasitic	y=1, n=0	n	
404	Unpalatable to grazing animals	y=1, n=-1		
405	Toxic to animals	y=1, n=0	n	
406	Host for recognized pests and pathogens	y=1, n=0		
407	Causes allergies or is otherwise toxic to humans	y=1, n=0	n	
408	Creates a fire hazard in natural ecosystems	y=1, n=0		
409	Is a shade tolerant plant at some stage of its life cycle	y=1, n=0		
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	y=1, n=0		
411	Climbing or smothering growth habit	y=1, n=0	n	

412	Forms dense thickets	y=1, n=0	
501	Aquatic	y=5, n=0	n
502	Grass	y=1, n=0	n
503	Nitrogen fixing woody plant	y=1, n=0	n
504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	y=1, n=0	n
601	Evidence of substantial reproductive failure in native habitat	y=1, n=0	n
602	Produces viable seed	y=1, n=-1	y
603	Hybridizes naturally	y=1, n=-1	
604	Self-compatible or apomictic	y=1, n=-1	n
605	Requires specialist pollinators	y=-1, n=0	
606	Reproduction by vegetative fragmentation	y=1, n=-1	
607	Minimum generative time (years)	1 year = 1, 2 or 3 years = 0, 4+ years = -1	
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y=1, n=-1	n
702	Propagules dispersed intentionally by people	y=1, n=-1	y
703	Propagules likely to disperse as a produce contaminant	y=1, n=-1	n
704	Propagules adapted to wind dispersal	y=1, n=-1	y
705	Propagules water dispersed	y=1, n=-1	
706	Propagules bird dispersed	y=1, n=-1	n
707	Propagules dispersed by other animals (externally)	y=1, n=-1	n
708	Propagules survive passage through the gut	y=1, n=-1	
801	Prolific seed production (>1000/m ²)	y=1, n=-1	
802	Evidence that a persistent propagule bank is formed (>1 yr)	y=1, n=-1	
803	Well controlled by herbicides	y=-1, n=1	
804	Tolerates, or benefits from, mutilation, cultivation, or fire	y=1, n=-1	
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	y=-1, n=1	

Designation: L

WRA Score -1

Supporting Data:

102	2011. WRA Specialist. Personal Communication.	NA
103	2011. WRA Specialist. Personal Communication.	NA
201	2011. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network (GRIN) [Online Database Index]. National Germplasm Resources Laboratory, Beltsville, Maryland. http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl	[Species suited to tropical or subtropical climate(s) 2-high] "Native: NORTHERN AMERICA Northern Mexico: Mexico - San Luis Potosi Southern Mexico: Mexico - Chiapas, Colima, Hidalgo, Nayarit, Oaxaca, Puebla, Queretaro, Tabasco, Veracruz SOUTHERN AMERICA Mesoamerica: Belize; Honduras Caribbean: Cuba; Dominican Republic; Grenada; Haiti; Martinique; St. Vincent and Grenadines"
202	2011. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network (GRIN) [Online Database Index]. National Germplasm Resources Laboratory, Beltsville, Maryland. http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl	[Quality of climate match data? 2-high] "Native: NORTHERN AMERICA Northern Mexico: Mexico - San Luis Potosi Southern Mexico: Mexico - Chiapas, Colima, Hidalgo, Nayarit, Oaxaca, Puebla, Queretaro, Tabasco, Veracruz SOUTHERN AMERICA Mesoamerica: Belize; Honduras Caribbean: Cuba; Dominican Republic; Grenada; Haiti; Martinique; St. Vincent and Grenadines"
203	2003. Llamas, K.A.. Tropical Flowering Plants. Timber Press, Portland, OR	[Broad climate suitability (environmental versatility)? No] "Mexico, Guatemala, Belize, Caribbean...zones 10-11."
203	2004. Salas-Morales, S.H.. <i>Berrya cubensis</i> (Griseb.) M. Gomez (Tiliaceae), Nuvo Registro para el Estado de Oaxaca, Mexico. Boletín de la Sociedad Botánica de México. 75: 137-139.	[Broad climate suitability (environmental versatility)? No] "The specimens come from altitudes varying from 100 to just over 800 m, although in the Zimatan river basin, the lowest altitude at which it is located is 460 m." [Apparently does not exhibit a broad elevation range]
204	2011. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network (GRIN) [Online Database Index]. National Germplasm Resources Laboratory, Beltsville, Maryland. http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl	[Native or naturalized in regions with tropical or subtropical climates? Yes] "Native: NORTHERN AMERICA Northern Mexico: Mexico - San Luis Potosi Southern Mexico: Mexico - Chiapas, Colima, Hidalgo, Nayarit, Oaxaca, Puebla, Queretaro, Tabasco, Veracruz SOUTHERN AMERICA Mesoamerica: Belize; Honduras Caribbean: Cuba; Dominican Republic; Grenada; Haiti; Martinique; St. Vincent and Grenadines"
205	2003. Llamas, K.A.. Tropical Flowering Plants. Timber Press, Portland, OR	[Does the species have a history of repeated introductions outside its natural range? No] "Underutilized but highly recommended."
205	2011. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network (GRIN) [Online Database Index]. National Germplasm Resources Laboratory, Beltsville, Maryland. http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl	[Does the species have a history of repeated introductions outside its natural range? No] No evidence
301	2007. Randall, R.P.. Global Compendium of Weeds - Index [Online Database]. http://www.hear.org/gcw/	[Naturalized beyond native range? No] No evidence [No species of <i>Berrya</i> or <i>Carpodiptera</i> listed as naturalized]
302	2007. Randall, R.P.. Global Compendium of Weeds - Index [Online Database]. http://www.hear.org/gcw/	[Garden/amenity/disturbance weed? No] No evidence
303	2007. Randall, R.P.. Global Compendium of Weeds - Index [Online Database]. http://www.hear.org/gcw/	[Agricultural/forestry/horticultural weed? No] No evidence
304	2007. Randall, R.P.. Global Compendium of Weeds - Index [Online Database]. http://www.hear.org/gcw/	[Environmental weed? No] No evidence
305	2007. Randall, R.P.. Global Compendium of Weeds - Index [Online Database]. http://www.hear.org/gcw/	[Congeneric weed? No] No species of <i>Berrya</i> or <i>Carpodiptera</i> (synonym) listed as invasive or weeds
401	2009. Pérez-Calix, E.. Tiliaceae. Flora del Bajío y de Regiones Adyacentes. Fascículo 160: 1-40.	[Produces spines, thorns or burrs? No] "Dioecious tree, 15 to 20 m tall, deciduous, almost straight trunk, flaky bark, Gray, ascending branches, glabrous or minutely new lepidote, alternate leaves, stipules ca. 0.5 mm long, lanceolate, deciduous petioles 2 to 7 cm long, fine and sparsely lepidote, sheets Leaf ovate to ovate-lanceolate, 8 to 20 cm long, 4.5 to 9.5 cm wide, apex obtuse or acuminate, base truncate, obtuse, obscurely cordate to rounded, margin entire, 5-nerved at the base, leathery, small and sparsely lepidote on both surfaces, bearded in the axils of the nerves on the underside;" [Translated from Spanish]
402	2004. Salas-Morales, S.H.. <i>Berrya cubensis</i> (Griseb.) M. Gomez (Tiliaceae), Nuvo Registro para el Estado de Oaxaca, Mexico. Boletín de la Sociedad Botánica de México. 75: 137-139.	[Allelopathic? No] "In Oaxaca <i>Berrya cubensis</i> is a small tree, 10 to 25 m tall. It loses its leaves during the dry season of the year and grows intermixed with other trees that are used to shade coffee..." [Translated from Spanish. No evidence of allelopathy, and unlikely to be allelopathic if grown as a shade tree for coffee]

403	2009. Pérez-Calix, E.. Tiliaceae. Flora del Bajío y de Regiones Adyacentes. Fascículo 160: 1-40.	[Parasitic? No] "Dioecious tree, 15 to 20 m tall, deciduous, almost straight trunk..." [Malvaceae]
404	2011. WRA Specialist. Personal Communication.	[Unpalatable to grazing animals? Unknown]
405	2011. WRA Specialist. Personal Communication.	[Toxic to animals? Unknown] Although Malvaceae generally not known to be toxic
406	2003. Llamas, K.A.. Tropical Flowering Plants. Timber Press, Portland, OR	[Host for recognized pests and pathogens? Unknown] "Pest resistant"
407	2003. Llamas, K.A.. Tropical Flowering Plants. Timber Press, Portland, OR	[Causes allergies or is otherwise toxic to humans? No] No evidence or warnings from ornamental reference
407	2011. Specialized Information Services, U.S. National Library of Medicine. TOXNET toxicology data network [online database]. National Institutes of Health, http://toxnet.nlm.nih.gov/	[Causes allergies or is otherwise toxic to humans? No] No evidence
408	2004. Salas-Morales, S.H.. <i>Berrya cubensis</i> (Griseb.) M. Gomez (Tiliaceae), Nuvo Registro para el Estado de Oaxaca, Mexico. Boletín de la Sociedad Botánica de México. 75: 137-139.	[Creates a fire hazard in natural ecosystems? Unknown] "In Mexico it has also been collected in other types of vegetation such as deciduous medium forest, evergreen forest, tropical deciduous forest with oaks, oak forest and secondary vegetation." [Unknown if species increases fire risks]
409	2003. Llamas, K.A.. Tropical Flowering Plants. Timber Press, Portland, OR	[Is a shade tolerant plant at some stage of its life cycle? Possibly No] "Average, well-drained soil. Full sun."
410	2003. Llamas, K.A.. Tropical Flowering Plants. Timber Press, Portland, OR	[Tolerates a wide range of soil conditions ? Unknown] "Average, well-drained soil. Full sun."
411	2009. Pérez-Calix, E.. Tiliaceae. Flora del Bajío y de Regiones Adyacentes. Fascículo 160: 1-40.	[Climbing or smothering growth habit? No] "Dioecious tree, 15 to 20 m tall, deciduous, almost straight trunk, flaky bark, Gray, ascending branches..."
412	2004. Salas-Morales, S.H.. <i>Berrya cubensis</i> (Griseb.) M. Gomez (Tiliaceae), Nuvo Registro para el Estado de Oaxaca, Mexico. Boletín de la Sociedad Botánica de México. 75: 137-139.	[Forms dense thickets? Unknown] "It is a minor element of the exclusively semi evergreen forest of the Zimatan river basin, while it seems to become one of the dominant species on the slopes of the Gulf of Mexico." [Translated from Spanish. Becomes a dominant element, but unknown if it forms dense thickets]
501	2009. Pérez-Calix, E.. Tiliaceae. Flora del Bajío y de Regiones Adyacentes. Fascículo 160: 1-40.	[Aquatic? No] "Dioecious tree, 15 to 20 m tall, deciduous, almost straight trunk, flaky bark, Gray, ascending branches..." [Terrestrial]
502	2011. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network (GRIN) [Online Database Index]. National Germplasm Resources Laboratory, Beltsville, Maryland. http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl	[Grass? No] Malvaceae [Also placed in: Brownlowiaceae, Tiliaceae]
503	2011. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network (GRIN) [Online Database Index]. National Germplasm Resources Laboratory, Beltsville, Maryland. http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl	[Nitrogen fixing woody plant? No] Malvaceae [Also placed in: Brownlowiaceae, Tiliaceae]
504	2009. Pérez-Calix, E.. Tiliaceae. Flora del Bajío y de Regiones Adyacentes. Fascículo 160: 1-40.	[Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)? No] "Dioecious tree, 15 to 20 m tall, deciduous, almost straight trunk, flaky bark, Gray, ascending branches..."
601	2004. Salas-Morales, S.H.. <i>Berrya cubensis</i> (Griseb.) M. Gomez (Tiliaceae), Nuvo Registro para el Estado de Oaxaca, Mexico. Boletín de la Sociedad Botánica de México. 75: 137-139.	[Evidence of substantial reproductive failure in native habitat? No] No evidence
601	2009. Pérez-Calix, E.. Tiliaceae. Flora del Bajío y de Regiones Adyacentes. Fascículo 160: 1-40.	[Evidence of substantial reproductive failure in native habitat? No] No evidence
602	1988. Wedge, D.E.. Reintroduction of Flowering Trees to South Florida. Proceedings of the Florida State Horticultural Society. 101: 136-139.	[Produces viable seed? Yes] "Seeds only germinate well under intermittent mist, mixed media."
602	2009. Pérez-Calix, E.. Tiliaceae. Flora del Bajío y de Regiones Adyacentes. Fascículo 160: 1-40.	[Produces viable seed? Yes] "fruit subglobose, 7 to 8 mm in diameter, finely puberulent, bivalves, with 4 wings elliptic, ca. 35 mm long, 14 mm wide, membranous, seeds 1 or 2 per carpel, ca. 5 mm long, more or less pubescent." [Translated from Spanish]
603	2011. WRA Specialist. Personal Communication.	[Hybridizes naturally? Unknown]
604	2003. Llamas, K.A.. Tropical Flowering Plants. Timber Press, Portland, OR	[Self-compatible or apomictic? No] "The American and African species have unisexual flowers with male and female on different plants (dioecious)..."

604	2009. Pérez-Calix, E.. Tiliaceae. Flora del Bajío y de Regiones Adyacentes. Fascículo 160: 1-40.	[Self-compatible or apomictic? No] "Dioecious tree..."
605	2009. Fleming, T.H./Geiselman, C./Kress, W.J.. The evolution of bat pollination: a phylogenetic perspective. <i>Annals of Botany</i> . 104: 1017–1043.	[Requires specialist pollinators? Possibly] "Appendix 2: New World bat-pollinated species listed by plant family" [Includes <i>Berrya cubensis</i> . No other details on pollination of this species were found]
606	2003. Llamas, K.A.. <i>Tropical Flowering Plants</i> . Timber Press, Portland, OR	[Reproduction by vegetative fragmentation? Unknown] "Grow from cuttings."
607	2011. WRA Specialist. Personal Communication.	[Minimum generative time (years)? Unknown]
701	2009. Pérez-Calix, E.. Tiliaceae. Flora del Bajío y de Regiones Adyacentes. Fascículo 160: 1-40.	[Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)? No] "fruit subglobose, 7 to 8 mm in diameter, finely puberulent, bivalves, with 4 wings elliptic, ca. 35 mm long, 14 mm wide, membranous,..." [No means of external attachment]
702	2003. Llamas, K.A.. <i>Tropical Flowering Plants</i> . Timber Press, Portland, OR	[Propagules dispersed intentionally by people? Yes] "Underutilized but highly recommended. Only male flowers are known from the Miami area." [Cultivated as an ornamental]
703	2009. Pérez-Calix, E.. Tiliaceae. Flora del Bajío y de Regiones Adyacentes. Fascículo 160: 1-40.	[Propagules likely to disperse as a produce contaminant? No] "fruit subglobose, 7 to 8 mm in diameter, finely puberulent, bivalves, with 4 wings elliptic, ca. 35 mm long, 14 mm wide, membranous,..." [Trees not grown with produce]
704	2009. Pérez-Calix, E.. Tiliaceae. Flora del Bajío y de Regiones Adyacentes. Fascículo 160: 1-40.	[Propagules adapted to wind dispersal? Yes] "fruit subglobose, 7 to 8 mm in diameter, finely puberulent, bivalves, with 4 wings elliptic, ca. 35 mm long, 14 mm wide, membranous,..." [winged fruit]
705	2003. Llamas, K.A.. <i>Tropical Flowering Plants</i> . Timber Press, Portland, OR	[Propagules water dispersed? Unknown] "Of seasonally moist forests and riversides."
705	2004. Salas-Morales, S.H.. <i>Berrya cubensis</i> (Griseb.) M. Gomez (Tiliaceae), Nuvo Registro para el Estado de Oaxaca, Mexico. <i>Boletín de la Sociedad Botánica de México</i> . 75: 137-139.	[Propagules water dispersed? Unknown] "Towards portions of lower elevation it is found on banks of streams." [Translation from Spanish. Distribution suggests fruit or seeds may be dispersed by water]
705	2009. Pérez-Calix, E.. Tiliaceae. Flora del Bajío y de Regiones Adyacentes. Fascículo 160: 1-40.	[Propagules water dispersed? Unknown] "fruit subglobose, 7 to 8 mm in diameter, finely puberulent, bivalves, with 4 wings elliptic, ca. 35 mm long, 14 mm wide, membranous, seeds 1 or 2 per carpel, ca. 5 mm long, more or less pubescent." [Possible that capsules may float]
706	2009. Pérez-Calix, E.. Tiliaceae. Flora del Bajío y de Regiones Adyacentes. Fascículo 160: 1-40.	[Propagules bird dispersed? No] "fruit subglobose, 7 to 8 mm in diameter, finely puberulent, bivalves, with 4 wings elliptic, ca. 35 mm long, 14 mm wide, membranous,..." [Unlikely. Not fleshy-fruited]
707	2009. Pérez-Calix, E.. Tiliaceae. Flora del Bajío y de Regiones Adyacentes. Fascículo 160: 1-40.	[Propagules dispersed by other animals (externally)? No] "fruit subglobose, 7 to 8 mm in diameter, finely puberulent, bivalves, with 4 wings elliptic, ca. 35 mm long, 14 mm wide, membranous,..."
708	2009. Pérez-Calix, E.. Tiliaceae. Flora del Bajío y de Regiones Adyacentes. Fascículo 160: 1-40.	[Propagules survive passage through the gut? Unknown] "fruit subglobose, 7 to 8 mm in diameter, finely puberulent, bivalves, with 4 wings elliptic, ca. 35 mm long, 14 mm wide, membranous,..." [Although fruits/seeds unlikely to be consumed]
801	2011. WRA Specialist. Personal Communication.	[Prolific seed production (>1000/m ²)? Unknown]
802	2011. WRA Specialist. Personal Communication.	[Evidence that a persistent propagule bank is formed (>1 yr)? Unknown]
803	2011. WRA Specialist. Personal Communication.	[Well controlled by herbicides? Unknown]
804	2009. Conservatoire et Jardin botaniques & South African National Biodiversity Institute. African Plant Database - <i>Berrya africana</i> (Mast.) Kosterm.. http://www.ville-ge.ch/musinfo/bd/cjb/africa/details.php?langue=a&n&id=122067	[Tolerates, or benefits from, mutilation, cultivation, or fire? Unknown] "Coastal species in <i>Brachystegia</i> woodland, mixed woodland or thickets; bushland; forming pure stands after burning (coppicing); 1-100 m alt. " [Description of related species, <i>Berrya africana</i> . Unknown for <i>B. cubensis</i>]
805	2011. WRA Specialist. Personal Communication.	[Effective natural enemies present locally (e.g. introduced biocontrol agents)? Unknown]