

Family: *Sapotaceae*

Taxon: *Pouteria campechiana*

Synonym: *Lucuma campechiana* Kunth (basionym) **Common Name:** canistel
Lucuma nervosa A. DC. eggfruit-tree
Lucuma rivicoa var. *angustifolia* Miq. yellow sapote
Lucuma salicifolia Kunth
Richardella nervosa (A. DC.) Pierre
Richardella salicifolia (Kunth) Pierre

Questionnaire :	current 20090513	Assessor:	Patti Clifford	Designation: L
Status:	Assessor Approved	Data Entry Person:	Patti Clifford	WRA Score -3
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	y	
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		
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	n	
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	n	

409	Is a shade tolerant plant at some stage of its life cycle	y=1, n=0	n
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	y=1, n=0	y
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	
605	Requires specialist pollinators	y=-1, n=0	
606	Reproduction by vegetative fragmentation	y=1, n=-1	n
607	Minimum generative time (years)	1 year = 1, 2 or 3 years = 0, 4+ years = -1	>3
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y=1, n=-1	
702	Propagules dispersed intentionally by people	y=1, n=-1	
703	Propagules likely to disperse as a produce contaminant	y=1, n=-1	n
704	Propagules adapted to wind dispersal	y=1, n=-1	n
705	Propagules water dispersed	y=1, n=-1	
706	Propagules bird dispersed	y=1, n=-1	y
707	Propagules dispersed by other animals (externally)	y=1, n=-1	n
708	Propagules survive passage through the gut	y=1, n=-1	y
801	Prolific seed production (>1000/m2)	y=1, n=-1	n
802	Evidence that a persistent propagule bank is formed (>1 yr)	y=1, n=-1	n
803	Well controlled by herbicides	y=-1, n=1	
804	Tolerates, or benefits from, mutilation, cultivation, or fire	y=1, n=-1	y
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	y=-1, n=1	

Designation: L

WRA Score -3

Supporting Data:

101	2012. WRA Specialist. Personal Communication.	[Is the species highly domesticated? No] No evidence of domestication that reduces invasive traits.
102	2012. WRA Specialist. Personal Communication.	[Has the species become naturalized where grown? NA]
103	2012. WRA Specialist. Personal Communication.	[Does the species have weedy races? NA]
201	2012. USDA ARS National Genetic Resources Program. Germplasm Resources Information Network - (GRIN). http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl	[Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"? 2 - High] Native distribution: Mexico; Belize; Costa Rica; El Salvador; Guatemala; Honduras; Nicaragua; Panama.
202	2012. USDA ARS National Genetic Resources Program. Germplasm Resources Information Network - (GRIN). http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl	[Quality of climate match data? 2 - High] Native distribution: Mexico; Belize; Costa Rica; El Salvador; Guatemala; Honduras; Nicaragua; Panama.
203	1987. Morton, J.. Fruits of warm climates. J.F. Morton, Miami, FL http://www.hort.purdue.edu/newcrop/morton	[Broad climate suitability (environmental versatility)? No] "The sapote tree is limited to tropical or near-tropical climates. In Central America, it flourishes from sea-level up to 2,000 ft (610 m); it is less common at 3,000 ft (914 m); and rare at 4,000 ft (1,220 m). Occasional trees have survived at 5,000 ft (1,500 m) but these grow slowly and fruit maturity is considerably delayed."
203	2009. Orwa, C./Mutua, A./Kindt, R./Jamnadass, R./Simons, A.. Agroforestry Database: a tree reference and selection guide version 4.0. World Agroforestry Centre, (http://www.worldagroforestry.org/af/treedb/)	[Broad climate suitability (environmental versatility)? No] The canistel needs a tropical or subtropical climate. In Guatemala, it is found at or below 1 400 m elevation.
203	2012. Dave's Garden. PlantFiles: Pouteria campechiana [accessed 17 October 2012]. http://davesgarden.com/guides/pf/go/99187/	[Broad climate suitability (environmental versatility)? No] USDA Hardiness: USDA Zone 10a: to -1.1 °C (30 °F) USDA Zone 10b: to 1.7 °C (35 °F) USDA Zone 11: above 4.5 °C (40 °F)
204	2012. USDA ARS National Genetic Resources Program. Germplasm Resources Information Network - (GRIN). http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl	[Native or naturalized in regions with tropical or subtropical climates? Yes] Native distribution: Mexico; Belize; Costa Rica; El Salvador; Guatemala; Honduras; Nicaragua; Panama.
205	2009. Orwa, C./Mutua, A./Kindt, R./Jamnadass, R./Simons, A.. Agroforestry Database: a tree reference and selection guide version 4.0. World Agroforestry Centre, (http://www.worldagroforestry.org/af/treedb/)	[Does the species have a history of repeated introductions outside its natural range? Yes] Pouteria campechiana has been introduced to: Colombia; Cuba; Honduras; Jamaica; Kenya; Nicaragua; Panama; Philippines; Puerto Rico; Tanzania; Uganda; United States.
301	1987. Morton, J.. Fruits of warm climates. J.F. Morton, Miami, FL http://www.hort.purdue.edu/newcrop/morton	[Naturalized beyond native range? No]"Some writers have reported the canistel as naturalized on the Florida Keys, in the Bahamas and Cuba, but specimens that appear to be growing in the wild are probably on the sites of former homesteads. Oris Russell, who has explored hundreds of acres of coppices in the Bahamas, has never seen the canistel or its close relative, <i>P. domingensis</i> Baehni, in a wild state. He says that abandoned plantings can be completely overgrown by coppice in 3 to 4 years."
301	2012. eFloras. Flora of North America - Magnoliophyta: Paeoniaceae to Ericaceae [accessed 16 October 2012]. Missouri Botanical Garden, St. Louis, MO & Harvard University Herbaria, Cambridge, MA. http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=2	[Naturalized beyond native range?] Pouteria campechiana, native from Mexico to Panama, is frequently cultivated and escaped or persistent in the West Indies and Florida.
302	2012. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	[Garden/amenity/disturbance weed? No] No evidence.
303	2012. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	[Agricultural/forestry/horticultural weed? No] No evidence.
304	2012. WRA Specialist. Personal Communication.	[Environmental weed? No] No evidence of impacts or control in native ecosystems.
305	2012. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	[Congeneric weed? No] No evidence.

401	2012. eFLoras. Flora of North America - Magnoliophyta: Paeoniaceae to Ericaceae [accessed 16 October 2012]. Missouri Botanical Garden, St. Louis, MO & Harvard University Herbaria, Cambridge, MA. http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=2	[Produces spines, thorns or burrs? No] Trees to 8 m. Leaves: petiole 10-25(-45) mm, finely hairy; blade elliptic to oblanceolate or obovate, 80-250(-330) x 30-80(-150) mm, margins revolute. Pedicels 6-12 mm, densely hairy.
402	2012. WRA Specialist. Personal Communication.	[Allelopathic? Unknown]
403	2012. eFLoras. Flora of North America - Magnoliophyta: Paeoniaceae to Ericaceae [accessed 16 October 2012]. Missouri Botanical Garden, St. Louis, MO & Harvard University Herbaria, Cambridge, MA. http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=2	[Parasitic? No] Sapotaceae.
404	2012. WRA Specialist. Personal Communication.	[Unpalatable to grazing animals? Unknown]
405	2012. National Center for Biotechnology Information. PubMed. http://www.ncbi.nlm.nih.gov/sites/entrez	[Toxic to animals? No] No evidence.
405	2012. Specialized Information Services, U.S. National Library of Medicine. TOXNET toxicology data network [online database]. National Institutes of Health, http://toxnet.nlm.nih.gov/	[Toxic to animals? No] No evidence.
406	1987. Morton, J.. Fruits of warm climates. J.F. Morton, Miami, FL http://www.hort.purdue.edu/newcrop/morton	[Host for recognized pests and pathogens? No] Few pests and diseases attack the canistel. In Florida only scale insects and the fungi, <i>Acrotelium lucumae</i> (rust); <i>Colletotrichum gloeosporioides</i> (fruit spot); <i>Elsinoë lepagei</i> (leaf spot and scab); and <i>Gloeosporium</i> (leaf necrosis) have been recorded for this species. The tree is nearly always vigorous and healthy.
407	1987. Morton, J.. Fruits of warm climates. J.F. Morton, Miami, FL http://www.hort.purdue.edu/newcrop/morton	[Causes allergies or is otherwise toxic to humans? No] Fruit is edible; bark and seed are used medicinally.
407	2012. National Center for Biotechnology Information. PubMed. http://www.ncbi.nlm.nih.gov/sites/entrez	[Causes allergies or is otherwise toxic to humans? No] No evidence.
407	2012. 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	2012. WRA Specialist. Personal Communication.	[Creates a fire hazard in natural ecosystems? No] No evidence of biomass accumulation.
409	20102. Trade winds fruit. <i>Pouteria campechiana</i> - canistel [accessed 17 October 2012]. http://www.tradewindsfruit.com/canistel.htm	[Is a shade tolerant plant at some stage of its life cycle?] Part shade to full sun.
409	2012. Dave's Garden. PlantFiles: <i>Pouteria campechiana</i> [accessed 17 October 2012]. http://davesgarden.com/guides/pf/go/99187/	[Is a shade tolerant plant at some stage of its life cycle? No] Full sun.
409	2012. Ledesma, N.. Growing canistel (<i>Pouteria campechiana</i>). Fairchild Tropical Botanic Garden, http://www.fairchildgarden.org/livingcollections/tropicalfruitprogram/jackfruit/growing-a-canistel-tree/	[Is a shade tolerant plant at some stage of its life cycle? No] Full sun.
410	1987. Morton, J.. Fruits of warm climates. J.F. Morton, Miami, FL http://www.hort.purdue.edu/newcrop/morton	[Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)? Yes] "The canistel is tolerant of a diversity of soils—calcareous, lateritic, acid-sandy, heavy clay. It makes best vegetative growth in deep, fertile, well-drained soil but is said to be more fruitful on shallow soil. It can be cultivated on soil considered too thin and poor for most other fruit trees."
410	2012. Ledesma, N.. Growing canistel (<i>Pouteria campechiana</i>). Fairchild Tropical Botanic Garden, http://www.fairchildgarden.org/livingcollections/tropicalfruitprogram/jackfruit/growing-a-canistel-tree/	[Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)? Yes] Tolerant of sandy or limestone soils.

411	2012. eFloras. Flora of North America - Magnoliophyta: Paeoniaceae to Ericaceae [accessed 16 October 2012]. Missouri Botanical Garden, St. Louis, MO & Harvard University Herbaria, Cambridge, MA. http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=2	[Climbing or smothering growth habit? No] Tree.
412	2012. WRA Specialist. Personal Communication.	[Forms dense thickets? Unknown]
501	2012. eFloras. Flora of North America - Magnoliophyta: Paeoniaceae to Ericaceae [accessed 16 October 2012]. Missouri Botanical Garden, St. Louis, MO & Harvard University Herbaria, Cambridge, MA. http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=2	[Aquatic? No] Terrestrial; tree.
502	2012. eFloras. Flora of North America - Magnoliophyta: Paeoniaceae to Ericaceae [accessed 16 October 2012]. Missouri Botanical Garden, St. Louis, MO & Harvard University Herbaria, Cambridge, MA. http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=2	[Grass? No] Sapotaceae; tree.
503	2012. eFloras. Flora of North America - Magnoliophyta: Paeoniaceae to Ericaceae [accessed 16 October 2012]. Missouri Botanical Garden, St. Louis, MO & Harvard University Herbaria, Cambridge, MA. http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=2	[Nitrogen fixing woody plant? No] Sapotaceae.
504	2012. eFloras. Flora of North America - Magnoliophyta: Paeoniaceae to Ericaceae [accessed 16 October 2012]. Missouri Botanical Garden, St. Louis, MO & Harvard University Herbaria, Cambridge, MA. http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=2	[Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)? No] Tree; woody.
601	2012. WRA Specialist. Personal Communication.	[Evidence of substantial reproductive failure in native habitat? No] No evidence.
602	1987. Morton, J.. Fruits of warm climates. J.F. Morton, Miami, FL http://www.hort.purdue.edu/newcrop/morton	[Produces viable seed? Yes] Pouteria campechiana seeds lose viability quickly and should be planted within a few days after removal from the fruit. If decorticated, seeds will germinate within 2 weeks; otherwise there may be a delay of 3 to 5 months before they sprout.
602	2008. Janick, J./Paull, R.E.. The Encyclopedia of Fruit & Nuts. Cabi Publishing, Wallingford, UK	[Produces viable seed? Yes] Propagate from seeds.
603	2012. WRA Specialist. Personal Communication.	[Hybridizes naturally? Unknown]
604	2008. Janick, J./Paull, R.E.. The Encyclopedia of Fruit & Nuts. Cabi Publishing, Wallingford, UK	[Self-compatible or apomictic?] Anecdotal evidence suggests that Pouteria campechiana is self-compatible.
604	2012. WRA Specialist. Personal Communication.	[Self-compatible or apomictic? Unknown]
605	1995. Roubik, D.W.. Pollination of cultivated plants in the tropics. FAO Services Bulletin 118. FAO, Rome, Italy	[Requires specialist pollinators?] Pouteria campechiana probably benefits from insect pollination.
605	2008. Janick, J./Paull, R.E.. The Encyclopedia of Fruit & Nuts. Cabi Publishing, Wallingford, UK	[Requires specialist pollinators?] Anecdotal evidence suggests that Pouteria campechiana is insect pollinated.
605	2012. WRA Specialist. Personal Communication.	[Requires specialist pollinators? Unknown]
606	1987. Morton, J.. Fruits of warm climates. J.F. Morton, Miami, FL http://www.hort.purdue.edu/newcrop/morton	[Reproduction by vegetative fragmentation? No] Vegetative propagation is preferred in order to hasten bearing and to reproduce the best selections. Side-veneer grafting, cleft grafting, patch budding and air-layering are usually successful. Cuttings take a long time to root. [not fragmentation]

607	1987. Morton, J.. Fruits of warm climates. J.F. Morton, Miami, FL http://www.hort.purdue.edu/newcrop/morton	[Minimum generative time (years)? > 3] Pouteria seedlings grow rapidly and begin to bear in 3 to 6 years.
607	2008. Janick, J./Paul, R.E.. The Encyclopedia of Fruit & Nuts. Cabi Publishing, Wallingford, UK	[Minimum generative time (years)? > 3] Seedling trees take 3-7 years to begin fruiting.
703	2009. Griscom, H.P./Griscom, B.W./Ashton, M.S.. Forest reneration from pasture in the dry tropics of Panama: effects of cattle, exotic grass, and forested riparia. Restoration Ecology. 17: 117-126.	[Propagules likely to disperse as a produce contaminant? No] Pouteria campechiana is dispersed by bats, birds, and mammals.
703	2012. eFloras. Flora of North America - Magnoliophyta: Paeoniaceae to Ericaceae [accessed 16 October 2012]. Missouri Botanical Garden, St. Louis, MO & Harvard University Herbaria, Cambridge, MA. http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=2	[Propagules likely to disperse as a produce contaminant? No] Berries 25-70 mm, apex short-rostrate, surface smooth. Seeds 1-6, 20-40 mm.
703	2012. WRA Specialist. Personal Communication.	[Propagules likely to disperse as a produce contaminant? No] No evidence.
704	2009. Griscom, H.P./Griscom, B.W./Ashton, M.S.. Forest reneration from pasture in the dry tropics of Panama: effects of cattle, exotic grass, and forested riparia. Restoration Ecology. 17: 117-126.	[Propagules adapted to wind dispersal? No] Pouteria campechiana is dispersed by bats, birds, and mammals.
704	2012. eFloras. Flora of North America - Magnoliophyta: Paeoniaceae to Ericaceae [accessed 16 October 2012]. Missouri Botanical Garden, St. Louis, MO & Harvard University Herbaria, Cambridge, MA. http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=2	[Propagules adapted to wind dispersal? No] Berries 25-70 mm, apex short-rostrate, surface smooth. Seeds 1-6, 20-40 mm.
705	2009. Griscom, H.P./Griscom, B.W./Ashton, M.S.. Forest reneration from pasture in the dry tropics of Panama: effects of cattle, exotic grass, and forested riparia. Restoration Ecology. 17: 117-126.	[Propagules water dispersed?] Pouteria campechiana is dispersed by bats, birds, and mammals.
705	2012. WRA Specialist. Personal Communication.	[Propagules water dispersed? Unknown] No information on buoyancy of seed.
706	2009. Griscom, H.P./Griscom, B.W./Ashton, M.S.. Forest reneration from pasture in the dry tropics of Panama: effects of cattle, exotic grass, and forested riparia. Restoration Ecology. 17: 117-126.	[Propagules bird dispersed? Yes] Puteria campechiana is dispersed by bats, birds, and mammals.
707	2009. Griscom, H.P./Griscom, B.W./Ashton, M.S.. Forest reneration from pasture in the dry tropics of Panama: effects of cattle, exotic grass, and forested riparia. Restoration Ecology. 17: 117-126.	[Propagules dispersed by other animals (externally)? No] Pouteria campechiana is dispersed by bats, birds, and mammals.
707	2012. eFloras. Flora of North America - Magnoliophyta: Paeoniaceae to Ericaceae [accessed 16 October 2012]. Missouri Botanical Garden, St. Louis, MO & Harvard University Herbaria, Cambridge, MA. http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=2	[Propagules dispersed by other animals (externally)? No] Berries 25-70 mm, apex short-rostrate, surface smooth. Seeds 1-6, 20-40 mm.
708	2009. Griscom, H.P./Griscom, B.W./Ashton, M.S.. Forest reneration from pasture in the dry tropics of Panama: effects of cattle, exotic grass, and forested riparia. Restoration Ecology. 17: 117-126.	[Propagules survive passage through the gut? Yes] Pouteria campechiana is dispersed by bats, birds, and mammals.

708	2009. Reid, F.A.. A field guide to the mammals of Central America and Southeast Mexico. Oxford University Press, http://books.google.com/books?id=aBEbUaXTWYAC&pg=PA267&lpg=PA267&dq=Pouteria+campechiana+%2B+%22pollinator%22&source=bl&ots=kIExr_if_A&sig=Je	[Propagules survive passage through the gut? Yes] The kinkajou (<i>Potos flavus</i>) disperses <i>Pouteria campechiana</i> in Mexico and Central America.
801	2012. eFloras. Flora of North America - Magnoliophyta: Paeoniaceae to Ericaceae [accessed 16 October 2012]. Missouri Botanical Garden, St. Louis, MO & Harvard University Herbaria, Cambridge, MA. http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=2	[Prolific seed production (>1000/m ²)? No] Berries 25-70 mm, apex short-rostrate, surface smooth. Seeds 1-6, 20-40 mm.
801	2012. WRA Specialist. Personal Communication.	[Prolific seed production (>1000/m ²)? No] Based on images from www.google.com and seed size.
802	1987. Morton, J.. Fruits of warm climates. J.F. Morton, Miami, FL http://www.hort.purdue.edu/newcrop/morton	[Evidence that a persistent propagule bank is formed (>1 yr)? No] <i>Pouteria campechiana</i> seeds lose viability quickly and should be planted within a few days after removal from the fruit. If decorticated, seeds will germinate within 2 weeks; otherwise there may be a delay of 3 to 5 months before they sprout.
802	2008. Janick, J./Paull, R.E.. The Encyclopedia of Fruit & Nuts. Cabi Publishing, Wallingford, UK	[Evidence that a persistent propagule bank is formed (>1 yr)? No] Seeds are short-lived and should be planted a few days after removal from the fruit.
803	2012. WRA Specialist. Personal Communication.	[Well controlled by herbicides? Unknown]
804	2009. Griscom, H.P./Griscom, B.W./Ashton, M.S.. Forest reneration from pasture in the dry tropics of Panama: effects of cattle, exotic grass, and forested riparia. <i>Restoration Ecology</i> . 17: 117-126.	[Tolerates, or benefits from, mutilation, cultivation, or fire? Yes] <i>Pouteria campechiana</i> is a stump-sprouting understorey tree.
805	2012. WRA Specialist. Personal Communication.	[Effective natural enemies present locally (e.g. introduced biocontrol agents)? Unknown]

Summary of Risk Traits

High Risk:

- Native to Tropical or tropical regions
- Tolerates a wide variety of soil types including limestone
- Produces viable seed
- Seed dispersed by birds and animals (long-distance dispersal)
- Coppices

Low Risk:

- Doesn't tolerate non-tropical/subtropical climates
- Not considered an invasive
- Unarmed (no spines, thorns, burrs)
- Non-toxic
- Does not reproduce from vegetative fragments
- Not a prolific seed producer
- Seeds lose viability quickly (no seedbank)