

Summary: Reject, Score 10. Trailing lily or climbing alstroemeria is an evergreen vine native to rain forests in the Andes in Colombia and Ecuador. It is naturalized in New Zealand where it is reported to be invasive because it has the potential to suppress growth and smother trees and low growing vegetation. Spreads via seeds and also vegetatively by suckering. Fruit is a capsule with bright orange or red fleshy seeds that might be dispersed by birds. Difficult to control by herbicides because the plant sprouts back or regrows from underground tubers.

Bomarea multiflora, Family: Alstroemeriaceae, Common name: Vine Alstroemeria, Trailing Lily, C Answer Score

1.01	Is the species highly domesticated? (If answer is 'no' then go to question 2.01)	y=-3, n=0	n	0
1.02	Has the species become naturalized where grown?	y= 1, n=-1		
1.03	Does the species have weedy races?	y=1, n=-1		
2.01	Species suited to tropical or subtropical climate(s) (0-low; 1-intermediate; 2-high) – If island i	See Appen	2	
2.02	Quality of climate match data (0-low; 1-intermediate; 2-high)	see appendix 2	1	
2.03	Broad climate suitability (environmental versatility)	y=1, n=0	n	0
2.04	Native or naturalized in regions with tropical or subtropical climates	y=1, n=0	y	1
2.05	Does the species have a history of repeated introductions outside its natural range?	y=-2 ?=-1, n=0	y	
3.01	Naturalized beyond native range	y = 1*multiplier (see Append 2), n= question 2.05	y	2
3.02	Garden/amenity/disturbance weed	y = 1*multiplier (see Append 2)	n=0	n 0
3.03	Agricultural/forestry/horticultural weed	y = 2*multiplier (see Append 2)	n=0	n 0
3.04	Environmental weed	y = 2*multiplier (see Append 2)	n=0	y 4
3.05	Congeneric weed	y = 1*multiplier (see Append 2)	n=0	n 0
4.01	Produces spines, thorns or burrs	y=1, n=0	n	0
4.02	Allelopathic	y=1, n=0	n	0
4.03	Parasitic	y=1, n=0	n	0
4.04	Unpalatable to grazing animals	y=1, n=-1		
4.05	Toxic to animals	y=1, n=0	n	0
4.06	Host for recognized pests and pathogens	y=1, n=0		
4.07	Causes allergies or is otherwise toxic to humans	y=1, n=0	y	1
4.08	Creates a fire hazard in natural ecosystems	y=1, n=0	n	0
4.09	Is a shade tolerant plant at some stage of its life cycle	y=1, n=0	y	1
4.10	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	y=1, n=0		
4.11	Climbing or smothering growth habit	y=1, n=0	y	1
4.12	Forms dense thickets	y=1, n=0	n	0
5.01	Aquatic	y=5, n=0	n	0
5.02	Grass	y=1, n=0	n	0
5.03	Nitrogen fixing woody plant	y=1, n=0	n	0
5.04	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	y=1, n=0	1	
6.01	Evidence of substantial reproductive failure in native habitat	y=1, n=0	n	0
6.02	Produces viable seed.	y=1, n=-1	y	1
6.03	Hybridizes naturally	y=1, n=-1		
6.04	Self-compatible or apomictic	y=1, n=-1		
6.05	Requires specialist pollinators	y=-1, n=0	n	0
6.06	Reproduction by vegetative fragmentation	y=1, n=-1	y	1
6.07	Minimum generative time (years)	1 year = 1, 2 or 3 years = 0, 4+ years = -1 See left	0	0
7.01	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y=1, n=-1	n	-1
7.02	Propagules dispersed intentionally by people	y=1, n=-1	y	1
7.03	Propagules likely to disperse as a produce contaminant	y=1, n=-1	n	-1
7.04	Propagules adapted to wind dispersal	y=1, n=-1	n	-1
7.05	Propagules water dispersed	y=1, n=-1	n	-1
7.06	Propagules bird dispersed	y=1, n=-1	y	1
7.07	Propagules dispersed by other animals (externally)	y=1, n=-1	n	-1
7.08	Propagules survive passage through the gut	y=1, n=-1		
8.01	Prolific seed production (>1000/m2)	y=1, n=-1	n	-1
8.02	Evidence that a persistent propagule bank is formed (>1 yr)	y=1, n=-1		
8.03	Well controlled by herbicides	y=-1, n=1	n	1
8.04	Tolerates, or benefits from, mutilation, cultivation, or fire	y=1, n=-1	y	1
8.05	Effective natural enemies present locally (e.g. introduced biocontrol agents)	y=-1, n=1		
Total score:				10

Notes

Reference

- 1.01 No evidence
1.02
1.03

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- 2.01 (1)A beautiful, small vine related to lilies, native to rain and cloud forests or paramo in the Andes in Colombia and Ecuador between 1200 and 4200 m. (2)Bomarea caldasii is an evergreen climbing species from Northern South America (1) <http://www.rarepalmseeds.com/pix/BomMul.shtml>
(2)<http://pacificbulbsociety.org/pbswiki/index.php/Bomarea>
- 2.02 Known to be introduced to New Zealand and California only. (1)Outside the Americas, Bomarea multiflora exists as a naturalized species in New Zealand, where it is regarded as an invasive plant. (2) Introduced to California and Texas https://www.researchgate.net/profile/Juan_Morrone/publication/29878890_Panbiogeographical_analysis_of_the_genus_Bomarea_Alstroemeriaceae/links/0046351ad439ac8278000000.pdf
(2)<http://davesgarden.com/guides/pf/go/117327/>
- 2.03 Zone 10-11 (2)"Unfortunately i don't know the climate tolerances of this plant. Most Bomareas come from cloud forests of the Andes mountains, where temperatures are mild all year and nights are cool. Most Bomareas don't thrive in hot climates, especially if nights are warm. It's possible that this plant will not perform well if temperatures consistently get above 85° F (30°C) and nights are above 65° F (18°C). The foliage may be killed by frost, but the tubers should be hardy to at least 25°F (-4°C). You may grow it indoors in a 5 gallon (20 (1)A beautiful, small vine related to lilies, native to rain and cloud forests or paramo in the Andes in Colombia and Ecuador between 1200 and 4200 m. (2)Bomarea caldasii is an evergreen climbing species from Northern South America (1) <http://www.rarepalmseeds.com/pix/BomMul.shtml>
(2)<http://pacificbulbsociety.org/pbswiki/index.php/Bomarea>
- 2.04 (1)A beautiful, small vine related to lilies, native to rain and cloud forests or paramo in the Andes in Colombia and Ecuador between 1200 and 4200 m. (2)Bomarea caldasii is an evergreen climbing species from Northern South America (1) <http://www.rarepalmseeds.com/pix/BomMul.shtml>
(2)<http://pacificbulbsociety.org/pbswiki/index.php/Bomarea>
- 2.05 Known to be introduced to New Zealand, US, and Europe but, not naturalized in US and Europe. (1)Outside the Americas, Bomarea multiflora exists as a naturalized species in New Zealand, where it is regarded as an invasive plant. (2) Introduced to California and Texas https://www.researchgate.net/profile/Juan_Morrone/publication/29878890_Panbiogeographical_analysis_of_the_genus_Bomarea_Alstroemeriaceae/links/0046351ad439ac8278000000.pdf
(2)<http://davesgarden.com/guides/pf/go/117327/>
(3)<http://www.gardening.eu/plants/Climber-plants/Bomarea-caldasii/1190/>
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- 3.01 Outside the Americas, Bomarea multiflora exists as a naturalized species in New Zealand, where it is regarded as an invasive plant. https://www.researchgate.net/profile/Juan_Morrone/publication/29878890_Panbiogeographical_analysis_of_the_genus_Bomarea_Alstroemeriaceae/links/0046351ad439ac8278000000.pdf
- 3.02 No evidence
- 3.03 No evidence
- 3.04 (1)Outside the Americas, Bomarea multiflora exists as a naturalized species in New Zealand, where it is regarded as an invasive plant. (2)Shade tolerant, fast growing plant. Has the potential to suppress growth and smother trees and low growing vegetation. https://www.researchgate.net/profile/Juan_Morrone/publication/29878890_Panbiogeographical_analysis_of_the_genus_Bomarea_Alstroemeriaceae/links/0046351ad439ac8278000000.pdf
(2)<http://pestplants.aucklandcouncil.govt.nz/plant-search/Bomcal>
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- 3.05 No evidence
- 4.01 No evidence
- 4.02 No evidence
- 4.03 No evidence
- 4.04 Don't know
- 4.05 No evidence
- 4.06 Don't know
- 4.07 Toxicity: Contact may cause skin irritation or allergic reaction. - No evidence other than this. <https://www.shootgardening.co.uk/plant/bomarea-multiflora>
- 4.08 Probably not - grows in relatively wet habitats. "Ecological Vegetation Divisions Heathland, grassy/heathy dry forest; lowland forest; foothills forest; forby forest; damp forest, wet forest; rainforest; high altitude shrubland/woodland; rocky outcrop shrubland; western plains woodland; alluvial plains grassland; semi-arid woodland; alluvial plains woodland ..." http://vro.agriculture.vic.gov.au/dpi/vro/vrosite.nsf/pages/weeds_bomarea-multiflora
- 4.09 Probably yes - "Sun Exposure: Full Sun, Sun to Partial Shade" (1)<http://davesgarden.com/guides/pf/go/117327/>
(2)Invades remnant forest and shrubland interiors (3)Light -- http://vro.agriculture.vic.gov.au/dpi/vro/vrosite.nsf/pages/weeds_bomarea-multiflora
Bomarea comes from the forests, where it gets tree-filtered sun most of the time. Aim for about 50% sun. (3)<http://www.strangewonderfulthings.com/tips124.htm>

- 4.10 Don't know of this particular species. In general: "Bomarea likes soil that's evenly moist, but not soggy. The soil should not be allowed to dry out. If your tap water is very "hard", meaning high in minerals, it may be best to use bottled water or rain water." <http://www.strangewonderfulthings.com/tips172.htm>
- 4.11 Bomarea multiflora is a multi-stemmed climber up to 6.6 feet (2 m) (2) Impact: Smothers plants in native ecosystems suppressing growth and regeneration. <http://worldoffloweringplants.com/bomarea-multiflora-vine-alstroemeria-trailing-lily/> (2) <http://www.gw.govt.nz/assets/Our-Environment/Biosecurity/Pest-plants/Pest-Plants-of-the-wgtn-region-brochure.pdf>
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- 4.12 No evidence
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- 5.01 A clumping, semi-evergreen, tuberous rooted, climbing perennial. Slender stems, clothed in bright green lance shaped leaves, arise from an underground rootstock to twine themselves around any available support <http://plantlust.com/plants/35121/bomarea-multiflora/>
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- 5.02 A clumping, semi-evergreen, tuberous rooted, climbing perennial. Slender stems, clothed in bright green lance shaped leaves, arise from an underground rootstock to twine themselves around any available support <http://plantlust.com/plants/35121/bomarea-multiflora/>
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- 5.03 A clumping, semi-evergreen, tuberous rooted, climbing perennial. Slender stems, clothed in bright green lance shaped leaves, arise from an underground rootstock to twine themselves around any available support <http://plantlust.com/plants/35121/bomarea-multiflora/>
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- 5.04 A clumping, semi-evergreen, tuberous rooted, climbing perennial. Slender stems, clothed in bright green lance shaped leaves, arise from an underground rootstock to twine themselves around any available support <http://plantlust.com/plants/35121/bomarea-multiflora/>
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- 6.01 No evidence
- 6.02 Growing from seed is not difficult. Collect seeds when the capsules have mature. Rub and wash away the red sarcotesta layer as it inhibits germination. <http://pacificbulbsociety.org/pbswiki/index.php/Bomarea>
- 6.03 Don't know
- 6.04 Don't know
- 6.05 The section Multiflorae of Bomarea subgenus Bomarea s.str. is revised. Seventy-nine species of Bomarea s.str. occur from Mexico (23°N) to Chile (40°S) on the western side of the Andes and on the eastern side to 28°S in Argentina. The 33 species of section Multiflorae can be found from 19°N to 18°S. North of Honduras and south of northern Peru they only grow on the eastern slopes of the American Cordilleras. Their distribution is nearly congruent with the distribution of cloud forests. Different species occur from 1500 m to 4500 m; they grow mostly twining, sometimes suberect to erect. They can be found in the cloud forests, the puna, and páramo. This section includes hummingbird pollinated and insect pollinated species. To date, 75 binomials are validly published, and, in this publication, 33 species are accepted. The distribution, morphology, variability, and ecology of the Multiflorae species are discussed. <http://www.ingentaconnect.com/content/aspt/sb/2008/00000033/0000004/art00006>
- 6.06 Can reproduce by suckering from roots or by seed. http://www.nzpcn.org.nz/flora_details.aspx?ID=3527
- 6.07 Seedlings will remain about the same size in a small pot for years but once they are put into a larger pot (such as a 1 gallon (~3 L) pot) they will take off and flower in 2-3 years. The best and largest blooming comes from plants that have established in the ground for several years. <http://pacificbulbsociety.org/pbswiki/index.php/Bomarea>
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- 7.01 Probably not = no evidence of propagules adapted for attachment or plants growing in heavily trafficked areas
- 7.02 Ornamental plant <http://www.cloudforest.com/cafe/forum/58486.html>
- 7.03 Probably not - not known to be grown near agricultural fields.
- 7.04 Probably not - Alstroemeria has explosive capsules with a brown seed coat whereas Bomarea does not have explosive capsules and the seeds are covered by a red fleshy sarcotesta layer. <http://pacificbulbsociety.org/pbswiki/index.php/Bomarea>

- 7.05 Probably not - no evidence of spread via water = "Alstroemeria has explosive capsules with a brown seed coat whereas Bomarea does not have explosive capsules and the seeds are covered by a red fleshy sarcotesta layer." <http://pacificbulbsociety.org/pbswiki/index.php/Bomarea>
- 7.06 Probably yes - fleshy seeds. (1)Alstroemeria has explosive capsules with a brown seed coat whereas Bomarea does not have explosive capsules and the seeds are covered by a red fleshy sarcotesta layer. (2)•the fruit is a capsule that splits to release bright orange or red fleshy seeds. <http://pacificbulbsociety.org/pbswiki/index.php/Bomarea>
(2)http://www.nzflora.info/factsheet/Weed/Bomarea_multiflora.html (2)http://www.nzpcn.org.nz/flora_details.aspx?ID=3527
- 7.07 Alstroemeria has explosive capsules with a brown seed coat whereas Bomarea does not have explosive capsules and the seeds are covered by a red fleshy sarcotesta layer. <http://pacificbulbsociety.org/pbswiki/index.php/Bomarea>
- 7.08 Probably dispersed by birds but, don't know if survives passage through gut. http://www.nzpcn.org.nz/flora_details.aspx?ID=3527
- 8.01 (1)Photo of cluster of seedpods - relatively large seeds - probably not. (2)Reddish on outside and yellow spots on inside, flowers develop into capsules about 2 cm in diameter. Ripen May-Aug with bright orange fleshy seeds. [\(1\)http://davesgarden.com/guides/pf/showimage/129913/](http://davesgarden.com/guides/pf/showimage/129913/)
(2)<http://pestplants.aucklandcouncil.govt.nz/plant-search/Bomcal>
- 8.02 Don't know
- 8.03 Site management - Regular follow up required. Recommended approaches 1. Dig out small infestations. Physical control very difficult- tubers or fragments left will regrow.
2. Cut near ground and stump paint (Vigilant gel). 3. Cut back & spray regrowth (200ml glyphosate + 10ml penetrant/10L) spring-summer.
- 8.04 Probably yes if can sucker. "Can reproduce by suckering from roots or by seed." http://www.nzpcn.org.nz/flora_details.aspx?ID=3527
- 8.05 Don't know