

**Family:** *Rubiaceae*

**Taxon:** *Portlandia grandiflora*

**Synonym:** NA

**Common Name:** bellflower  
campana grande

**Questionnaire :** current 20090513  
**Status:** Assessor Approved

**Assessor:** Patti Clifford  
**Data Entry Person:** Patti Clifford

**Designation:** L

**WRA Score** -4

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	
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	
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	
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	n
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	2
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	n
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/m2)	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 -4

---

**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) - <i>Portlandia grandiflora</i> L.. National Germplasm Resources Laboratory, Beltsville, Maryland <a href="http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?29447#comm">http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?29447#comm</a>	[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 distributions: Jamaica.
202	2012. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) - <i>Portlandia grandiflora</i> L.. National Germplasm Resources Laboratory, Beltsville, Maryland <a href="http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?29447#comm">http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?29447#comm</a>	[Quality of climate match data? 2 - high] Native distributions: Jamaica.
203	2012. WRA Specialist. Personal Communication.	[Broad climate suitability (environmental versatility)? Unknown]
204	2012. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) - <i>Portlandia grandiflora</i> L.. National Germplasm Resources Laboratory, Beltsville, Maryland <a href="http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?29447#comm">http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?29447#comm</a>	[Native or naturalized in regions with tropical or subtropical climates? Yes] Native distributions: Jamaica.
205	2012. Crowley Nursery. <i>Portlandia grandiflora</i> . <a href="http://crowleynursery.net/about_us.htm">http://crowleynursery.net/about_us.htm</a>	[Does the species have a history of repeated introductions outside its natural range? Yes] Crowley Nursery has <i>Portlandia</i> for sale.
205	2012. Richard Lyons. <i>Portlandia grandiflora</i> . <a href="http://www.rarefloweringtrees.com/index.php?option=com_gallery2&amp;Itemid=43&amp;g2_itemid=519">http://www.rarefloweringtrees.com/index.php?option=com_gallery2&amp;Itemid=43&amp;g2_itemid=519</a>	[Does the species have a history of repeated introductions outside its natural range? Yes] Richard Lyon's Nursery has <i>Portlandia</i> for sale.
205	2012. Top Tropicals. <i>Portlandia grandiflora</i> . <a href="http://toptropicals.com/catalog/uid/portlandia_grandiflora.htm">http://toptropicals.com/catalog/uid/portlandia_grandiflora.htm</a>	[Does the species have a history of repeated introductions outside its natural range? Yes] TopTropicals has <i>Portlandia grandiflora</i> for sale.
301	2012. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	[Naturalized beyond native range? No] No evidence.
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. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	[Environmental weed? No] No evidence.
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	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Produces spines, thorns or burrs? No] No spines, thorns, burrs.
402	2012. WRA Specialist. Personal Communication.	[Allelopathic? Unknown]
403	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Parasitic? No] Rubiaceae.
404	2012. WRA Specialist. Personal Communication.	[Unpalatable to grazing animals? Unknown]

405	2008. Wagstaff, D.J.. International poisonous plants checklist: an evidence-based reference. CRC Press, Boca Raton, FL	[Toxic to animals? No] No evidence.
405	2012. National Center for Biotechnology Information. PubMed. <a href="http://www.ncbi.nlm.nih.gov/sites/entrez">http://www.ncbi.nlm.nih.gov/sites/entrez</a>	[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, <a href="http://toxnet.nlm.nih.gov/">http://toxnet.nlm.nih.gov/</a>	[Toxic to animals? No] No evidence.
406	2012. WRA Specialist. Personal Communication.	[Host for recognized pests and pathogens? Unknown]
407	2008. Wagstaff, D.J.. International poisonous plants checklist: an evidence-based reference. CRC Press, Boca Raton, FL	[Causes allergies or is otherwise toxic to humans? No] No evidence.
407	2012. National Center for Biotechnology Information. PubMed. <a href="http://www.ncbi.nlm.nih.gov/sites/entrez">http://www.ncbi.nlm.nih.gov/sites/entrez</a>	[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, <a href="http://toxnet.nlm.nih.gov/">http://toxnet.nlm.nih.gov/</a>	[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	2007. McLaughlin, J./Balerdi, C./Beckford, M.. Small Trees for Miami-Dade Landscapes. UF-IFAS/Miami-Dade County Extension Service, Homestead, FL	[Is a shade tolerant plant at some stage of its life cycle?] Light afternoon shade, otherwise full sun.
409	2012. Dave's Garden. PlantFiles: Portlandia grandiflora. <a href="http://davesgarden.com/guides/pt/go/160984/">http://davesgarden.com/guides/pt/go/160984/</a>	[Is a shade tolerant plant at some stage of its life cycle?] Full sun to part shade.
410	2007. McLaughlin, J./Balerdi, C./Beckford, M.. Small Trees for Miami-Dade Landscapes. UF-IFAS/Miami-Dade County Extension Service, Homestead, FL	[Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)? Yes] Tolerates limestone soils.
410	2012. Fairchild Tropical Botanic Garden. Distribution plants 2000 - Portlandia grandiflora. <a href="http://www.fairchildgarden.org/livingcollections/plantsaleinformationpages/2000membersdayplantsales/">http://www.fairchildgarden.org/livingcollections/plantsaleinformationpages/2000membersdayplantsales/</a>	[Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)? Yes] Portlandia grandiflora grows on limestone soils in Jamaica.
411	1987. Clay, H.F./Hubbard, J.C./Golt, R.. Tropical shrubs. University of Hawaii Press, <a href="http://books.google.com/books?id=692L-8HWiEsC&amp;dq=portlandia+grandiflora+%2B+%22prune%22&amp;source=gbs_navlinks_s">http://books.google.com/books?id=692L-8HWiEsC&amp;dq=portlandia+grandiflora+%2B+%22prune%22&amp;source=gbs_navlinks_s</a>	[Climbing or smothering growth habit? No] Erect, woody, evergreen shrub.
412	2012. WRA Specialist. Personal Communication.	[Forms dense thickets? No] No evidence.
501	1987. Clay, H.F./Hubbard, J.C./Golt, R.. Tropical shrubs. University of Hawaii Press, <a href="http://books.google.com/books?id=692L-8HWiEsC&amp;dq=portlandia+grandiflora+%2B+%22prune%22&amp;source=gbs_navlinks_s">http://books.google.com/books?id=692L-8HWiEsC&amp;dq=portlandia+grandiflora+%2B+%22prune%22&amp;source=gbs_navlinks_s</a>	[Aquatic? No] Shrub; terrestrial.
502	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Grass? No] Rubiaceae; shrub.
503	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Nitrogen fixing woody plant? No] Rubiaceae.

504	1987. Clay, H.F./Hubbard, J.C./Golt, R.. Tropical shrubs. University of Hawaii Press, <a href="http://books.google.com/books?id=692L-8HWiEsC&amp;dq=portlandia+grandiflora+%2B+%22prune%22&amp;source=gbs_navlinks_s">http://books.google.com/books?id=692L-8HWiEsC&amp;dq=portlandia+grandiflora+%2B+%22prune%22&amp;source=gbs_navlinks_s</a>	[Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)? No] Shrub; woody.
601	1987. Clay, H.F./Hubbard, J.C./Golt, R.. Tropical shrubs. University of Hawaii Press, <a href="http://books.google.com/books?id=692L-8HWiEsC&amp;dq=portlandia+grandiflora+%2B+%22prune%22&amp;source=gbs_navlinks_s">http://books.google.com/books?id=692L-8HWiEsC&amp;dq=portlandia+grandiflora+%2B+%22prune%22&amp;source=gbs_navlinks_s</a>	[Evidence of substantial reproductive failure in native habitat? No] No evidence.
602	1987. Clay, H.F./Hubbard, J.C./Golt, R.. Tropical shrubs. University of Hawaii Press, <a href="http://books.google.com/books?id=692L-8HWiEsC&amp;dq=portlandia+grandiflora+%2B+%22prune%22&amp;source=gbs_navlinks_s">http://books.google.com/books?id=692L-8HWiEsC&amp;dq=portlandia+grandiflora+%2B+%22prune%22&amp;source=gbs_navlinks_s</a>	[Produces viable seed? Yes] Portlandia is difficult to propagate. Seeds germinate sporadically over a period of many months.
603	2012. WRA Specialist. Personal Communication.	[Hybridizes naturally? Unknown]
604	2012. WRA Specialist. Personal Communication.	[Self-compatible or apomictic? Unknown]
605	1906. Knuth, P./Müller, H.. Handbook of Flower Pollination: Introduction and literature. Princeton University, Princeton, NJ	[Requires specialist pollinators?] Narrow tubed arrangement; long-flowered type - the corolla tubes are long so that usually only Sphingidae (hawk moths) can reach the honey.
605	2009. McLaughlin, J.. A word or two about gardening - night time fragrance for your garden. <a href="http://www.google.com/url?sa=t&amp;rct=j&amp;q=&amp;esrc=s&amp;source=web&amp;cd=2&amp;ved=0CCgQFjAB&amp;url=http%3A%2F%2Fmiami-dade.ifas.ufl.edu%2Fpdfs%2Furban_hort%2FNight%2520time%2520frag">http://www.google.com/url?sa=t&amp;rct=j&amp;q=&amp;esrc=s&amp;source=web&amp;cd=2&amp;ved=0CCgQFjAB&amp;url=http%3A%2F%2Fmiami-dade.ifas.ufl.edu%2Fpdfs%2Furban_hort%2FNight%2520time%2520frag</a>	[Requires specialist pollinators?] Portlandia emit a vanilla fragrance at night and are believed to be pollinated by bats.
606	1987. Clay, H.F./Hubbard, J.C./Golt, R.. Tropical shrubs. University of Hawaii Press, <a href="http://books.google.com/books?id=692L-8HWiEsC&amp;dq=portlandia+grandiflora+%2B+%22prune%22&amp;source=gbs_navlinks_s">http://books.google.com/books?id=692L-8HWiEsC&amp;dq=portlandia+grandiflora+%2B+%22prune%22&amp;source=gbs_navlinks_s</a>	[Reproduction by vegetative fragmentation? No] Difficult to propagate. Propagate from cuttings and seed.
607	2009. McLaughlin, J.. A word or two about gardening - night time fragrance for your garden. <a href="http://www.google.com/url?sa=t&amp;rct=j&amp;q=&amp;esrc=s&amp;source=web&amp;cd=2&amp;ved=0CCgQFjAB&amp;url=http%3A%2F%2Fmiami-dade.ifas.ufl.edu%2Fpdfs%2Furban_hort%2FNight%2520time%2520frag">http://www.google.com/url?sa=t&amp;rct=j&amp;q=&amp;esrc=s&amp;source=web&amp;cd=2&amp;ved=0CCgQFjAB&amp;url=http%3A%2F%2Fmiami-dade.ifas.ufl.edu%2Fpdfs%2Furban_hort%2FNight%2520time%2520frag</a>	[Minimum generative time (years)? 2] Slow-growing, but should flower in two years.
701	2012. WRA Specialist. Personal Communication.	[Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)? No evidence]
702	1987. Clay, H.F./Hubbard, J.C./Golt, R.. Tropical shrubs. University of Hawaii Press, <a href="http://books.google.com/books?id=692L-8HWiEsC&amp;dq=portlandia+grandiflora+%2B+%22prune%22&amp;source=gbs_navlinks_s">http://books.google.com/books?id=692L-8HWiEsC&amp;dq=portlandia+grandiflora+%2B+%22prune%22&amp;source=gbs_navlinks_s</a>	[Propagules dispersed intentionally by people? Yes] Introduced to Hawaii by Harold L. Lyon in 1928.
702	2012. Top Tropicals. Portlandia grandiflora. <a href="http://toptropicals.com/catalog/uid/portlandia_grandiflora.htm">http://toptropicals.com/catalog/uid/portlandia_grandiflora.htm</a>	[Propagules dispersed intentionally by people? Yes] TopTropicals has Portlandia grandiflora for sale.
703	2012. WRA Specialist. Personal Communication.	[Propagules likely to disperse as a produce contaminant? No ] No evidence.
704	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Propagules adapted to wind dispersal? No] Fruit a capsule.
705	2012. WRA Specialist. Personal Communication.	[Propagules water dispersed? Unknown]
706	2012. WRA Specialist. Personal Communication.	[Propagules bird dispersed? No] Fruit a capsule.

707	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Propagules dispersed by other animals (externally)? No] Fruit a capsule. [no means of attachment]
708	2012. WRA Specialist. Personal Communication.	[Propagules survive passage through the gut? Unknown]
801	2012. WRA Specialist. Personal Communication.	[Prolific seed production (>1000/m2)? Unknown]
802	2012. WRA Specialist. Personal Communication.	[Evidence that a persistent propagule bank is formed (>1 yr)? Unknown]
803	2012. WRA Specialist. Personal Communication.	[Well controlled by herbicides? Unknown]
804	1987. Clay, H.F./Hubbard, J.C./Golt, R.. Tropical shrubs. University of Hawaii Press, <a href="http://books.google.com/books?id=692L-8HWiEsC&amp;dq=portlandia+grandiflora+%2B+%22prune%22&amp;source=gbs_navlinks_s">http://books.google.com/books?id=692L-8HWiEsC&amp;dq=portlandia+grandiflora+%2B+%22prune%22&amp;source=gbs_navlinks_s</a>	[Tolerates, or benefits from, mutilation, cultivation, or fire?] Prune carefully to shape only.
804	2012. WRA Specialist. Personal Communication.	[Tolerates, or benefits from, mutilation, cultivation, or fire? Unknown]
805	2012. WRA Specialist. Personal Communication.	[Effective natural enemies present locally (e.g. introduced biocontrol agents)? Unknown]

## Summary of Risk Traits

### **Low Risk:**

Not a weed elsewhere

Unarmed

Not toxic to humans or animals

Difficult to propagate from seed

Limited dispersal mechanisms

### **High Risk:**

Native to tropical regions

Possibly shade tolerant

Tolerates limestone soils