

Australia/New Zealand Weed Risk Assessment adapted for Florida.

Data used for analysis published in: Gordon, D.R., D.A. Onderdonk, A.M. Fox, R.K. Stocker, and C. Gantz. 2008. Predicting Invasive Plants in Florida using the Australian Weed Risk Assessment. *Invasive Plant Science and Management* 1: 178-195.

| <i>Bracteantha bracteata</i> (strawflower) | | | |
|--|--|--------|-------|
| Question number | Question | Answer | Score |
| 1.01 | Is the species highly domesticated? | n | 0 |
| 1.02 | Has the species become naturalised where grown? | | |
| 1.03 | Does the species have weedy races? | | |
| 2.01 | Species suited to Florida's USDA climate zones (0-low; 1-intermediate; 2-high) | 2 | |
| 2.02 | Quality of climate match data (0-low; 1-intermediate; 2-high) | 2 | |
| 2.03 | Broad climate suitability (environmental versatility) | | |
| 2.04 | Native or naturalized in habitats with periodic inundation | | |
| 2.05 | Does the species have a history of repeated introductions outside its natural range? | y | |
| 3.01 | Naturalized beyond native range | y | 0 |
| 3.02 | Garden/amenity/disturbance weed | n | 0 |
| 3.03 | Weed of agriculture | n | 0 |
| 3.04 | Environmental weed | n | 0 |
| 3.05 | Congeneric weed | n | 0 |
| 4.01 | Produces spines, thorns or burrs | n | 0 |
| 4.02 | Allelopathic | n | 0 |
| 4.03 | Parasitic | n | 0 |
| 4.04 | Unpalatable to grazing animals | | |
| 4.05 | Toxic to animals | n | 0 |
| 4.06 | Host for recognised pests and pathogens | | |
| 4.07 | Causes allergies or is otherwise toxic to humans | n | 0 |
| 4.08 | Creates a fire hazard in natural ecosystems | n | 0 |
| 4.09 | Is a shade tolerant plant at some stage of its life cycle | n | 0 |
| 4.1 | Grows on infertile soils (oligotrophic, limerock, or excessively draining soils) | y | 1 |
| 4.11 | Climbing or smothering growth habit | n | 0 |
| 4.12 | Forms dense thickets | n | 0 |
| 5.01 | Aquatic | n | 0 |
| 5.02 | Grass | n | 0 |
| 5.03 | Nitrogen fixing woody plant | n | 0 |
| 5.04 | Geophyte | n | 0 |
| 6.01 | Evidence of substantial reproductive failure in native habitat | | |
| 6.02 | Produces viable seed | y | 1 |
| 6.03 | Hybridizes naturally | | |
| 6.04 | Self-compatible or apomictic | | |
| 6.05 | Requires specialist pollinators | n? | 0 |

| | | | |
|--------------------|--|---|----------|
| 6.06 | Reproduction by vegetative fragmentation | | |
| 6.07 | Minimum generative time (years) | 1 | 1 |
| 7.01 | Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas) | | |
| 7.02 | Propagules dispersed intentionally by people | y | 1 |
| 7.03 | Propagules likely to disperse as a produce contaminant | n | -1 |
| 7.04 | Propagules adapted to wind dispersal | y | 1 |
| 7.05 | Propagules water dispersed | n | -1 |
| 7.06 | Propagules bird dispersed | n | -1 |
| 7.07 | Propagules dispersed by other animals (externally) | n | -1 |
| 7.08 | Propagules dispersed by other animals (internally) | n | -1 |
| 8.01 | Prolific seed production | | |
| 8.02 | Evidence that a persistent propagule bank is formed (>1 yr) | | |
| 8.03 | Well controlled by herbicides | | |
| 8.04 | Tolerates, or benefits from, mutilation or cultivation | | |
| 8.05 | Effective natural enemies present in Florida, or east of the continental divide | | |
| Total Score | | | 2 |

| | |
|----------------|----------------|
| Outcome | Accept* |
|----------------|----------------|

*Used secondary screen from: Daehler, C. C., J.L. Denslow, S. Ansari, and H. Kuo. 2004. A risk assessment system for screening out harmful invasive pest plants from Hawaii's and other Pacific islands. *Conserv. Biol.* 18: 360-368.

| section | # questions answered | satisfy minimum? |
|---------|----------------------|------------------|
| A | 6 | yes |
| B | 10 | yes |
| C | 14 | yes |
| total | 30 | yes |

Data collected 2006-2007

| Question number | Reference | Source data |
|-----------------|---|--|
| 1.01 | | cultivated, but no evidence of selection for reduced weediness |
| 1.02 | | |
| 1.03 | | |
| 2.01 | | |
| 2.02 | | |
| 2.03 | | |
| 2.04 | | |
| 2.05 | Huxley (1992) <i>The New Royal Horticultural Society Dictionary of Gardening</i> . The MacMillan Press, London. | "frequently grown for cutting and drying" |

| | | |
|------|--|--|
| 3.01 | 1. Huxley (1992) The New Royal Horticultural Society Dictionary of Gardening. The MacMillan Press, London. 2. Liogier (1997) Descriptive Flora of Puerto Rico and Adjacent Islands. Vol. 5. Editorial de la Universidad de Puerto Rico. | 1. Native to Australia, naturalized in Spain 2. cultivated and escaping in Puerto Rico [=naturalized?] |
| 3.02 | | no evidence |
| 3.03 | | no evidence |
| 3.04 | | no evidence |
| 3.05 | | no evidence |
| 4.01 | Harden, ed. (1992) Flora of New South Wales, vol. 3. New South Wales University Press. | no description of these traits |
| 4.02 | | no evidence |
| 4.03 | Harden, ed. (1992) Flora of New South Wales, vol. 3. New South Wales University Press. | no description of this |
| 4.04 | | |
| 4.05 | | no evidence |
| 4.06 | | |
| 4.07 | | no evidence |
| 4.08 | | no evidence |
| 4.09 | 1. Hortocopia 4.0. 2. Huxley (1992) The New Royal Horticultural Society Dictionary of Gardening. The MacMillan Press, London. | full sun (1, 2) |
| 4.1 | Harden, ed. (1992) Flora of New South Wales, vol. 3. New South Wales University Press. | "usually on sandy to sandy loam soils" |
| 4.11 | Harden, ed. (1992) Flora of New South Wales, vol. 3. New South Wales University Press. | erect herb |
| 4.12 | | no evidence |
| 5.01 | | terrestrial |
| 5.02 | USDA, NRCS. 2005. The PLANTS Database, Version 3.5 (http://plants.usda.gov). Data compiled from various sources by Mark W. Skinner. National Plant Data Center, Baton Rouge, LA 70874-4490 USA. | Asteraceae |
| 5.03 | USDA, NRCS. 2005. The PLANTS Database, Version 3.5 (http://plants.usda.gov). Data compiled from various sources by Mark W. Skinner. National Plant Data Center, Baton Rouge, LA 70874-4490 USA. | herbaceous Asteraceae |
| 5.04 | Hortocopia 4.0 | "This plant's roots are fibrous." |
| 6.01 | | |
| 6.02 | Hortocopia 4.0 | propagate from seeds |
| 6.03 | | |
| 6.04 | | |
| 6.05 | Hortocopia 4.0 | attracts butterflies |
| 6.06 | | |
| 6.07 | Harden, ed. (1992) Flora of New South Wales, vol. 3. New South Wales University Press. | usually annual |
| 7.01 | | |
| 7.02 | Huxley (1992) The New Royal Horticultural Society Dictionary of Gardening. The MacMillan Press, London. | "frequently grown for cutting and drying" |
| 7.03 | | no evidence |
| 7.04 | Harden, ed. (1992) Flora of New South Wales, vol. 3. New South Wales University Press. | fruit is a 4-angled achene, approx. 3.5 mm long, with a pappus |
| 7.05 | | no evidence |

| | | |
|------|---|--|
| 7.06 | | wind dispersed |
| 7.07 | Harden, ed. (1992) Flora of New South Wales, vol. 3. New South Wales University Press. | fruit is a 4-angled achene, approx. 3.5 mm long, with a pappus [no evidence of any means of attachment] |
| 7.08 | | wind dispersed |
| 8.01 | | |
| 8.02 | | |
| 8.03 | | |
| 8.04 | | |
| 8.05 | | |