

Taxon: <i>Erythrina bidwillii</i> Lindl.	Family: Fabaceae
Common Name(s): Bidwell's coral tree fireman's cap shrub coral tree	Synonym(s): <i>Erythrina</i> × <i>bidwillii</i> Lindley <i>Erythrina corallodendron</i> T.C.Huang

Assessor: Chuck Chimera	Status: Assessor Approved	End Date: 3 Jul 2019
WRA Score: -4.0	Designation: L	Rating: Low Risk

Keywords: Sterile Hybrid, Thorny, Ornamental, Toxic Properties, N-Fixing

Qsn #	Question	Answer Option	Answer
101	Is the species highly domesticated?	y=-3, n=0	n
102	Has the species become naturalized where grown?		
103	Does the species have weedy races?		
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)	y
401	Produces spines, thorns or burrs	y=1, n=0	y
402	Allelopathic		
403	Parasitic	y=1, n=0	n
404	Unpalatable to grazing animals	y=1, n=-1	y
405	Toxic to animals	y=1, n=0	y
406	Host for recognized pests and pathogens		
407	Causes allergies or is otherwise toxic to humans	y=1, n=0	y
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		

Qsn #	Question	Answer Option	Answer
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	y
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	n
603	Hybridizes naturally		
604	Self-compatible or apomictic	y=1, n=-1	n
605	Requires specialist pollinators	y=-1, n=0	n
606	Reproduction by vegetative fragmentation	y=1, n=-1	n
607	Minimum generative time (years)		
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	n
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	n
801	Prolific seed production (>1000/m ²)	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		
804	Tolerates, or benefits from, mutilation, cultivation, or fire		
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)		

Supporting Data:

Qsn #	Question	Answer
101	Is the species highly domesticated?	n
	Source(s)	Notes
	Nesom, G. L. (2015). Key to native and cultivated species of <i>Erythrina</i> (Fabaceae) in the USA and comments on naturalization of <i>E. crista-galli</i> . <i>Phytoneuron</i> , 29, 1-8	[Sterile hybrid. Not domesticated] "Sterile hybrid between <i>E. crista-galli</i> and <i>E. herbacea</i> . Spreading shrubs or small trees 2–4 meters tall, flowering while leafy, deciduous. The original hybrid was made in Australia in about 1840 — distinct forms were segregated from the progeny (Wikipedia 2013). <i>Erythrina</i> x <i>bidwillii</i> 'Camdeni' (the common one in the USA) is similar to <i>E. crista-galli</i> in its perennial woody form, while <i>E. x bidwillii</i> 'Blakei' follows <i>E. herbacea</i> in dying back to a rootstock each year. Increased frost tolerance in the hybrid reflects its heritage from <i>E. herbacea</i> , and in Austin, Texas, <i>E. x bidwillii</i> is said to recover to flowering more quickly than <i>E. crista-galli</i> after a frost (San Marcos Growers 2015)."

102	Has the species become naturalized where grown?	
	Source(s)	Notes
	WRA Specialist. (2019). Personal Communication	NA

103	Does the species have weedy races?	
	Source(s)	Notes
	WRA Specialist. (2019). Personal Communication	NA

201	Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"	High
	Source(s)	Notes
	Nesom, G. L. (2015). Key to native and cultivated species of <i>Erythrina</i> (Fabaceae) in the USA and comments on naturalization of <i>E. crista-galli</i> . <i>Phytoneuron</i> , 29, 1-8	"Sterile hybrid between <i>E. crista-galli</i> and <i>E. herbacea</i> ." [<i>Erythrina crista-galli</i> is native to Brazil, Bolivia, Argentina, Paraguay & Uruguay. <i>E. herbacea</i> is native to Alabama, Arkansas (s.), Florida, Georgia, Louisiana, North Carolina (s.e.), South Carolina (e. & s.), Mississippi, Texas and Mexico [Tamaulipas]]

202	Quality of climate match data	High
	Source(s)	Notes
	Nesom, G. L. (2015). Key to native and cultivated species of <i>Erythrina</i> (Fabaceae) in the USA and comments on naturalization of <i>E. crista-galli</i> . <i>Phytoneuron</i> , 29, 1-8	"Sterile hybrid between <i>E. crista-galli</i> and <i>E. herbacea</i> ." [<i>Erythrina crista-galli</i> is native to Brazil, Bolivia, Argentina, Paraguay & Uruguay. <i>E. herbacea</i> is native to Alabama, Arkansas (s.), Florida, Georgia, Louisiana, North Carolina (s.e.), South Carolina (e. & s.), Mississippi, Texas and Mexico [Tamaulipas]]

203	Broad climate suitability (environmental versatility)	n
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Qsn #	Question	Answer
	Source(s)	Notes
	Dave's Garden. (2019). <i>Erythrina</i> Species, Fireman's Cap, Shrub Coral Tree. <i>Erythrina bidwillii</i> . https://davesgarden.com . [Accessed 2 Jul 2019]	"Hardiness: USDA Zone 9a: to -6.6 °C (20 °F) USDA Zone 9b: to -3.8 °C (25 °F) 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)"
	Nesom, G. L. (2015). Key to native and cultivated species of <i>Erythrina</i> (Fabaceae) in the USA and comments on naturalization of <i>E. crista-galli</i> . <i>Phytoneuron</i> , 29, 1-8	"Increased frost tolerance in the hybrid reflects its heritage from <i>E. herbacea</i> , and in Austin, Texas, <i>E. x bidwillii</i> is said to recover to flowering more quickly than <i>E. crista-galli</i> after a frost (San Marcos Growers 2015)."

204	Native or naturalized in regions with tropical or subtropical climates	y
	Source(s)	Notes
	Nesom, G. L. (2015). Key to native and cultivated species of <i>Erythrina</i> (Fabaceae) in the USA and comments on naturalization of <i>E. crista-galli</i> . <i>Phytoneuron</i> , 29, 1-8	"Sterile hybrid between <i>E. crista-galli</i> and <i>E. herbacea</i> ." [<i>Erythrina crista-galli</i> is native to Brazil, Bolivia, Argentina, Paraguay & Uruguay. <i>E. herbacea</i> is native to Alabama, Arkansas (s.), Florida, Georgia, Louisiana, North Carolina (s.e.), South Carolina (e. & s.), Mississippi, Texas and Mexico [Tamaulipas]]

205	Does the species have a history of repeated introductions outside its natural range?	y
	Source(s)	Notes
	Nesom, G. L. (2015). Key to native and cultivated species of <i>Erythrina</i> (Fabaceae) in the USA and comments on naturalization of <i>E. crista-galli</i> . <i>Phytoneuron</i> , 29, 1-8	" <i>Erythrina x bidwillii</i> 'Camdeni' (the common one in the USA) is similar to <i>E. crista-galli</i> in its perennial woody form, while <i>E. x bidwillii</i> 'Blakei' follows <i>E. herbacea</i> in dying back to a rootstock each year."
	Dave's Garden. (2019). <i>Erythrina</i> Species, Fireman's Cap, Shrub Coral Tree. <i>Erythrina bidwillii</i> . https://davesgarden.com . [Accessed 2 Jul 2019]	"This plant has been said to grow in the following regions: Grenoble, Phenix City, Alabama Glendale, Arizona Maricopa, Arizona Tucson, Arizona Oakland, California Boca Raton, Florida Mulberry, Florida Ocoee, Florida Palm Bay, Florida Port Charlotte, Florida Saint Petersburg, Florida Brunswick, Georgia McDonough, Georgia Baton Rouge, Louisiana Thibodaux, Louisiana Pass Christian, Mississippi Raleigh, North Carolina Beaufort, South Carolina Saint Helena Island, South Carolina Arlington, Texas Austin, Texas Baytown, Texas Dayton, Texas Hondo, Texas Houston, Texas Lewisville, Texas Missouri City, Texas San Antonio, Texas Temple, Texas King George, Virginia"

Qsn #	Question	Answer
301	Naturalized beyond native range	n
	Source(s)	Notes
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence
	Wagner, W.L., Herbst, D.R.& Lorence, D.H. (2019). Flora of the Hawaiian Islands. Smithsonian Institution, Washington, D.C. http://botany.si.edu/ . [Accessed 2 Jul 2019]	No evidence to date

302	Garden/amenity/disturbance weed	n
	Source(s)	Notes
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence

303	Agricultural/forestry/horticultural weed	n
	Source(s)	Notes
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence

304	Environmental weed	n
	Source(s)	Notes
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence

305	Congeneric weed	y
	Source(s)	Notes

Qsn #	Question	Answer
	Queensland Government. (2019). Weeds of Australia. <i>Erythrina x sykesii</i> . http://keyserver.lucidcentral.org . [Accessed 2 Jul 2019]	"Common coral tree (<i>Erythrina x sykesii</i>) is regarded as an environmental weed in many parts of New South Wales. It appears on numerous local and regional weed lists in this state (e.g. in the wider Sydney and Blue Mountains region and in the North Coast and South Coast regions) and is currently listed as a priority environmental weed in at least one Natural Resource Management region. This species does not produce viable seed and only propagates vegetatively, via stem segments and suckers. Logs, branches and even twigs will grow into new plants and they break easily, thereby aiding its spread during floods. Common coral tree (<i>Erythrina x sykesii</i>) has spread from garden and street plantings into bushland areas, often aided by the dumping of garden waste. It is primarily a problem along creeks and rivers, but will also grow in disturbed natural vegetation and open woodlands. In New South Wales it has been reported to replace native riparian vegetation, block the flow of creeks, increase creek bank erosion, and cause other trees to fall over. It has also been recorded from conservation areas, including Eurobodalla National Park and Murramarang National Park in the South Coast region. In southwestern Western Australia it is reported to grow along river edges between Perth and Bunbury."
	Weedbusters. (2019). Coral tree - <i>Erythrina x sykesii</i> . https://www.weedbusters.org.nz/weed-information/weed-list/coral-tree/ . [Accessed 2 Jul 2019]	"What damage does it do? Forms tall, spreading canopy, preventing native plants from establishing. Leaf litter and fallen branches under it stop other plants growing."

401	Produces spines, thorns or burrs	y
	Source(s)	Notes
	Dave's Garden. (2019). <i>Erythrina</i> Species, Fireman's Cap, Shrub Coral Tree. <i>Erythrina bidwillii</i> . https://davesgarden.com . [Accessed 2 Jul 2019]	"Plant has spines or sharp edges; use extreme caution when handling"
	Spencer, R. (2002). Horticultural Flora of South-Eastern Australia, Volume 3. Flowering Plants. Dicotyledons Part 2. Royal Botanic Gardens, Melbourne	"Shrub to small tree. Leaflets 5-10 cm long, generally ovate-elliptic as in <i>E. crista-galli</i> and occasionally with a single prickle."

402	Allelopathic	
	Source(s)	Notes
	Weedbusters. (2019). Coral tree - <i>Erythrina x sykesii</i> . https://www.weedbusters.org.nz/weed-information/weed-list/coral-tree/ . [Accessed 2 Jul 2019]	[Unknown. Another <i>Erythrina</i> hybrid is suspected of being allelopathic] "Why is it weedy? Sterile hybrid so sets no seed, but all stems root upon contact with ground, forming dense stands. Grows rapidly, lives a long time and replaces canopy trees. Possibly allelopathic. Tolerates a wide range of conditions ? hot to warm, wet to dry, fertile to very poor soils, and little shade."

Qsn #	Question	Answer
403	Parasitic	n
	Source(s)	Notes
	Spencer, R. (2002). Horticultural Flora of South-Eastern Australia, Volume 3. Flowering Plants. Dicotyledons Part 2. Royal Botanic Gardens, Melbourne	"Shrub to small tree." [Fabaceae. No evidence]

404	Unpalatable to grazing animals	y
	Source(s)	Notes
	Lisa's Landscape & Design. (2019). "Fireman's Cap" Coral Bean (<i>Erythrina x bidwillii</i>). https://lialapaso.com/2013/05/24/firemans-cap-coral-bean-erythrina-x-bidwillii/ . [Accessed 3 Jul 2019]	"This plant is also toxic so if you have little ones prone to putting things in their mouth, you might choose to avoid this plant until they are older because it drops the long flower tubes onto the ground like a red carpet and can be a problem for animals and kiddos who like to eat what they see. The good news is that it is very deer and critter resistant for the same reasons."

405	Toxic to animals	y
	Source(s)	Notes
	Plants for a Future. (2019). <i>Erythrina x bidwillii</i> . https://pfaf.org/user/Plant.aspx?LatinName=Erythrina+x+bidwillii . [Accessed 3 Jul 2019]	"The plant contains alkaloids that have powerful narcotic and purgative effects["
	Lisa's Landscape & Design. (2019). "Fireman's Cap" Coral Bean (<i>Erythrina x bidwillii</i>). https://lialapaso.com/2013/05/24/firemans-cap-coral-bean-erythrina-x-bidwillii/ . [Accessed 3 Jul 2019]	"This plant is also toxic so if you have little ones prone to putting things in their mouth, you might choose to avoid this plant until they are older because it drops the long flower tubes onto the ground like a red carpet and can be a problem for animals and kiddos who like to eat what they see. The good news is that it is very deer and critter resistant for the same reasons."

406	Host for recognized pests and pathogens	
	Source(s)	Notes
	GreenPlantSwap. (2019). <i>Erythrina bidwillii</i> Coral tree. https://www.greenplantswap.co.uk/plants/7560-erythrina-bidwillii . [Accessed 3 Jul 2019]	"Pests, diseases or disorders - Red spider mites and seed drop can create a weed problem in garden beds."

407	Causes allergies or is otherwise toxic to humans	y
	Source(s)	Notes
	Plants for a Future. (2019). <i>Erythrina x bidwillii</i> . https://pfaf.org/user/Plant.aspx?LatinName=Erythrina+x+bidwillii . [Accessed 3 Jul 2019]	"The plant contains alkaloids that have powerful narcotic and purgative effects["
	Lisa's Landscape & Design. (2019). "Fireman's Cap" Coral Bean (<i>Erythrina x bidwillii</i>). https://lialapaso.com/2013/05/24/firemans-cap-coral-bean-erythrina-x-bidwillii/ . [Accessed 3 Jul 2019]	"This plant is also toxic so if you have little ones prone to putting things in their mouth, you might choose to avoid this plant until they are older because it drops the long flower tubes onto the ground like a red carpet and can be a problem for animals and kiddos who like to eat what they see. The good news is that it is very deer and critter resistant for the same reasons."

Qsn #	Question	Answer
408	Creates a fire hazard in natural ecosystems	n
	Source(s)	Notes
	Plants for a Future. (2019). <i>Erythrina x bidwillii</i> . https://pfaf.org/user/Plant.aspx?LatinName=Erythrina+x+bidwillii . [Accessed 3 Jul 2019]	"Habitats Not known in the wild."

409	Is a shade tolerant plant at some stage of its life cycle	
	Source(s)	Notes
	Llamas, K.A. 2003. Tropical Flowering Plants. Timber Press, Portland, OR	"Average, well-drained soil. Full sun."
	GreenPlantSwap. (2019). <i>Erythrina bidwillii</i> Coral tree. https://www.greenplantswap.co.uk/plants/7560-erythrina-bidwillii . [Accessed 3 Jul 2019]	"Light - Full sun"
	Plants for a Future. (2019). <i>Erythrina x bidwillii</i> . https://pfaf.org/user/Plant.aspx?LatinName=Erythrina+x+bidwillii . [Accessed 3 Jul 2019]	"Requires a moderately fertile well-drained soil in a very sunny position[200]." ... "It can grow in semi-shade (light woodland) or no shade."
	Lisa's Landscape & Design. (2019). "Fireman's Cap" Coral Bean (<i>Erythrina x bidwillii</i>). https://lisalapaso.com/2013/05/24/firemans-cap-coral-bean-erythrina-x-bidwillii/ . [Accessed 3 Jul 2019]	"The Fireman's Cap Coral Bean is a full sun to part sun plant that is a completely drought tolerant, deciduous perennial."

410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	y
	Source(s)	Notes
	Llamas, K.A. 2003. Tropical Flowering Plants. Timber Press, Portland, OR	"Average, well-drained soil."
	Plants for a Future. (2019). <i>Erythrina x bidwillii</i> . https://pfaf.org/user/Plant.aspx?LatinName=Erythrina+x+bidwillii . [Accessed 3 Jul 2019]	"Suitable for: light (sandy), medium (loamy) and heavy (clay) soils. Suitable pH: acid, neutral and basic (alkaline) soils. It can grow in semi-shade (light woodland) or no shade. It prefers moist soil."
	GreenPlantSwap. (2019). <i>Erythrina bidwillii</i> Coral tree. https://www.greenplantswap.co.uk/plants/7560-erythrina-bidwillii . [Accessed 3 Jul 2019]	"They are half hardy to frost tender, min 5C, and will require full light and well drained soil."

411	Climbing or smothering growth habit	n
	Source(s)	Notes
	Spencer, R. (2002). Horticultural Flora of South-Eastern Australia, Volume 3. Flowering Plants. Dicotyledons Part 2. Royal Botanic Gardens, Melbourne	"Shrub to small tree. Leaflets 5-10 cm long, generally ovate-elliptic as in <i>E. crista-galli</i> and occasionally with a single prickle. FLOWERS to 5 cm long, in characteristic long, deep blood red clusters; standards about 4-5 cm long, relatively narrow, about 1-1.5 cm wide. Sepals in a bell-shaped slightly split tube, mostly as long as or slightly longer than wide. Stamens with upper half protruding from the keels in mature flowers."

412	Forms dense thickets	n
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Qsn #	Question	Answer
	Source(s)	Notes
	Plants for a Future. (2019). <i>Erythrina x bidwillii</i> . https://pfaf.org/user/Plant.aspx?LatinName=Erythrina+x+bidwillii . [Accessed 3 Jul 2019]	"Not known in the wild."
	Nesom, G. L. (2015). Key to native and cultivated species of <i>Erythrina</i> (Fabaceae) in the USA and comments on naturalization of <i>E. crista-galli</i> . <i>Phytoneuron</i> , 29, 1-8	[No evidence] "Sterile hybrid between <i>E. crista-galli</i> and <i>E. herbacea</i> . Spreading shrubs or small trees 2–4 meters tall, flowering while leafy, deciduous."

501	Aquatic	n
	Source(s)	Notes
	Spencer, R. (2002). Horticultural Flora of South-Eastern Australia, Volume 3. Flowering Plants. Dicotyledons Part 2. Royal Botanic Gardens, Melbourne	[Terrestrial] "Shrub to small tree."

502	Grass	n
	Source(s)	Notes
	USDA, ARS, Germplasm Resources Information Network. 2019. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html . [Accessed 2 Jul 2019]	Family: Fabaceae (alt.Leguminosae) Subfamily: Faboideae Tribe: Phaseoleae

503	Nitrogen fixing woody plant	y
	Source(s)	Notes
	USDA, ARS, Germplasm Resources Information Network. 2019. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html . [Accessed 2 Jul 2019]	Family: Fabaceae (alt.Leguminosae) Subfamily: Faboideae Tribe: Phaseoleae

504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	n
	Source(s)	Notes
	Spencer, R. (2002). Horticultural Flora of South-Eastern Australia, Volume 3. Flowering Plants. Dicotyledons Part 2. Royal Botanic Gardens, Melbourne	"Shrub to small tree."

601	Evidence of substantial reproductive failure in native habitat	n
	Source(s)	Notes

Qsn #	Question	Answer
	Nesom, G. L. (2015). Key to native and cultivated species of <i>Erythrina</i> (Fabaceae) in the USA and comments on naturalization of <i>E. crista-galli</i> . <i>Phytoneuron</i> , 29, 1-8	[Artificial hybrid. No native range] "Sterile hybrid between <i>E. crista-galli</i> and <i>E. herbacea</i> . Spreading shrubs or small trees 2–4 meters tall, flowering while leafy, deciduous. The original hybrid was made in Australia in about 1840 — distinct forms were segregated from the progeny (Wikipedia 2013). <i>Erythrina</i> x <i>bidwillii</i> 'Camdeni' (the common one in the USA) is similar to <i>E. crista-galli</i> in its perennial woody form, while <i>E. x bidwillii</i> 'Blakei' follows <i>E. herbacea</i> in dying back to a rootstock each year. Increased frost tolerance in the hybrid reflects its heritage from <i>E. herbacea</i> , and in Austin, Texas, <i>E. x bidwillii</i> is said to recover to flowering more quickly than <i>E. crista-galli</i> after a frost (San Marcos Growers 2015)."

602	Produces viable seed	n
	Source(s)	Notes
	Neill, D. A. (1988). Experimental studies on species relationships in <i>Erythrina</i> (Leguminosae: Papilionoideae). <i>Annals of the Missouri Botanical Garden</i> , 75(3): 886-969	"I examined <i>E. x bidwillii</i> in cultivation at Foster Garden, Honolulu (FG 64.2035). Meiosis in pollen mother cells was normal with 21 bivalents at meta- phase I. Pollen fertility was 63%, comparable to Graham & Tomb's (1974) report of 76% normal pollen for this hybrid. I attempted to produce an F2 generation by controlled self-pollination of 60 flowers over a period of several weeks. Young fruits were obtained but they invariably aborted before two weeks of development. I have not seen mature spontaneously produced fruits on any cultivated plants or herbarium specimens of <i>E. x bidwillii</i> , so the reports of its viable seed production are questionable."
	Dave's Garden. (2019). <i>Erythrina</i> Species, Fireman's Cap, Shrub Coral Tree. <i>Erythrina bidwillii</i> . https://davesgarden.com . [Accessed 2 Jul 2019]	"Seed Collecting: N/A: plant does not set seed, flowers are sterile, or plants will not come true from seed"
	Nesom, G. L. (2015). Key to native and cultivated species of <i>Erythrina</i> (Fabaceae) in the USA and comments on naturalization of <i>E. crista-galli</i> . <i>Phytoneuron</i> , 29, 1-8	"Sterile hybrid between <i>E. crista-galli</i> and <i>E. herbacea</i> . Spreading shrubs or small trees 2–4 meters tall, flowering while leafy, deciduous."

603	Hybridizes naturally	
	Source(s)	Notes
	Neill, D. A. (1988). Experimental studies on species relationships in <i>Erythrina</i> (Leguminosae: Papilionoideae). <i>Annals of the Missouri Botanical Garden</i> , 75(3): 886-969	[Possibly, although no evidence of natural hybridization was documented] "I made limited attempts (12 trial pollinations) to backcross <i>E. x bidwillii</i> to one of its parents, <i>E. crista-galli</i> . The pollinations all failed, but given the reasonably high pollen fertility of <i>E. x bidwillii</i> , it is likely that with perseverance some backcross progeny could be obtained."

604	Self-compatible or apomictic	n
	Source(s)	Notes

Qsn #	Question	Answer
	Neill, D. A. (1988). Experimental studies on species relationships in <i>Erythrina</i> (Leguminosae: Papilionoideae). <i>Annals of the Missouri Botanical Garden</i> , 75(3): 886-969	[Self-pollination produced no seeds] "I examined <i>E. X bidwillii</i> in cultivation at Foster Garden, Honolulu (FG 64.2035). Meiosis in pollen mother cells was normal with 21 bivalents at meta- phase I. Pollen fertility was 63%, comparable to Graham & Tomb's (1974) report of 76% normal pollen for this hybrid. I attempted to produce an F2 generation by controlled self-pollination of 60 flowers over a period of several weeks. Young fruits were obtained but they invariably aborted before two weeks of development. I have not seen mature spontaneously produced fruits on any cultivated plants or herbarium specimens of <i>E. x bidwillii</i> , so the reports of its viable seed production are questionable."

605	Requires specialist pollinators	n
	Source(s)	Notes
	Nesom, G. L. (2015). Key to native and cultivated species of <i>Erythrina</i> (Fabaceae) in the USA and comments on naturalization of <i>E. crista-galli</i> . <i>Phytoneuron</i> , 29, 1-8	[Sterile hybrid. Pollinators irrelevant, but related species adapted for bird pollination] "Corollas banners pseudotubular, enclosing keel and wings (pollinated mostly by hummingbirds); species of North America and South America." ... "Corolla banners folded to convex and boat shaped, usually distinctly separated from keel and wings (pollinated mostly by perching birds, sometimes also by bees); species of South America and Asia, cultivated in the USA." ... "Sterile hybrid between <i>E. crista-galli</i> and <i>E. herbacea</i> ."

606	Reproduction by vegetative fragmentation	n
	Source(s)	Notes
	Nesom, G. L. (2015). Key to native and cultivated species of <i>Erythrina</i> (Fabaceae) in the USA and comments on naturalization of <i>E. crista-galli</i> . <i>Phytoneuron</i> , 29, 1-8	[Sterile hybrid propagated by cuttings In contrast, a different hybrid spreads vegetatively and has become invasive] " <i>Erythrina x bidwillii</i> ... Sterile hybrid between <i>E. crista-galli</i> and <i>E. herbacea</i> . Spreading shrubs or small trees 2–4 meters tall, flowering while leafy, deciduous." ... " <i>Erythrina x sykesii</i> has become naturalized in New Zealand and in southern and eastern Australia, where it propagates via root suckers and stem layering (the stems are brittle and shed easily when windy)."

607	Minimum generative time (years)	n
	Source(s)	Notes
	Nesom, G. L. (2015). Key to native and cultivated species of <i>Erythrina</i> (Fabaceae) in the USA and comments on naturalization of <i>E. crista-galli</i> . <i>Phytoneuron</i> , 29, 1-8	[Sterile hybrid. Time to maturity irrelevant] "Sterile hybrid between <i>E. crista-galli</i> and <i>E. herbacea</i> ."

701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	n
	Source(s)	Notes
	Nesom, G. L. (2015). Key to native and cultivated species of <i>Erythrina</i> (Fabaceae) in the USA and comments on naturalization of <i>E. crista-galli</i> . <i>Phytoneuron</i> , 29, 1-8	"Sterile hybrid between <i>E. crista-galli</i> and <i>E. herbacea</i> . Spreading shrubs or small trees 2–4 meters tall, floering while leafy, deciduous." [No seeds produced]

Qsn #	Question	Answer
702	Propagules dispersed intentionally by people	y
	Source(s)	Notes
	Spencer, R. (2002). Horticultural Flora of South-Eastern Australia, Volume 3. Flowering Plants. Dicotyledons Part 2. Royal Botanic Gardens, Melbourne	[Planted as an ornamental] "It is described in the monograph on <i>Erythrina</i> as, 'the best known and biologically most successful hybrid <i>erythrina</i> ,' which adds, 'it seems likely that not all the races grown today under the name are descendants of the original cross'."
703	Propagules likely to disperse as a produce contaminant	n
	Source(s)	Notes
	Nesom, G. L. (2015). Key to native and cultivated species of <i>Erythrina</i> (Fabaceae) in the USA and comments on naturalization of <i>E. crista-galli</i> . <i>Phytoneuron</i> , 29, 1-8	"Sterile hybrid between <i>E. crista-galli</i> and <i>E. herbacea</i> . Spreading shrubs or small trees 2–4 meters tall, flowering while leafy, deciduous." [No seeds produced]
704	Propagules adapted to wind dispersal	n
	Source(s)	Notes
	Nesom, G. L. (2015). Key to native and cultivated species of <i>Erythrina</i> (Fabaceae) in the USA and comments on naturalization of <i>E. crista-galli</i> . <i>Phytoneuron</i> , 29, 1-8	"Sterile hybrid between <i>E. crista-galli</i> and <i>E. herbacea</i> . Spreading shrubs or small trees 2–4 meters tall, flowering while leafy, deciduous." [No seeds produced]
705	Propagules water dispersed	n
	Source(s)	Notes
	Nesom, G. L. (2015). Key to native and cultivated species of <i>Erythrina</i> (Fabaceae) in the USA and comments on naturalization of <i>E. crista-galli</i> . <i>Phytoneuron</i> , 29, 1-8	"Sterile hybrid between <i>E. crista-galli</i> and <i>E. herbacea</i> . Spreading shrubs or small trees 2–4 meters tall, flowering while leafy, deciduous." [No seeds produced]
706	Propagules bird dispersed	n
	Source(s)	Notes
	Nesom, G. L. (2015). Key to native and cultivated species of <i>Erythrina</i> (Fabaceae) in the USA and comments on naturalization of <i>E. crista-galli</i> . <i>Phytoneuron</i> , 29, 1-8	"Sterile hybrid between <i>E. crista-galli</i> and <i>E. herbacea</i> . Spreading shrubs or small trees 2–4 meters tall, flowering while leafy, deciduous." [No seeds produced]
707	Propagules dispersed by other animals (externally)	n
	Source(s)	Notes
	Nesom, G. L. (2015). Key to native and cultivated species of <i>Erythrina</i> (Fabaceae) in the USA and comments on naturalization of <i>E. crista-galli</i> . <i>Phytoneuron</i> , 29, 1-8	"Sterile hybrid between <i>E. crista-galli</i> and <i>E. herbacea</i> . Spreading shrubs or small trees 2–4 meters tall, flowering while leafy, deciduous." [No seeds produced]

Qsn #	Question	Answer
708	Propagules survive passage through the gut	n
	Source(s)	Notes
	Nesom, G. L. (2015). Key to native and cultivated species of <i>Erythrina</i> (Fabaceae) in the USA and comments on naturalization of <i>E. crista-galli</i> . <i>Phytoneuron</i> , 29, 1-8	"Sterile hybrid between <i>E. crista-galli</i> and <i>E. herbacea</i> . Spreading shrubs or small trees 2–4 meters tall, flowering while leafy, deciduous." [No seeds produced]

801	Prolific seed production (>1000/m2)	n
	Source(s)	Notes
	Nesom, G. L. (2015). Key to native and cultivated species of <i>Erythrina</i> (Fabaceae) in the USA and comments on naturalization of <i>E. crista-galli</i> . <i>Phytoneuron</i> , 29, 1-8	"Sterile hybrid between <i>E. crista-galli</i> and <i>E. herbacea</i> . Spreading shrubs or small trees 2–4 meters tall, flowering while leafy, deciduous." [No seeds produced]

802	Evidence that a persistent propagule bank is formed (>1 yr)	n
	Source(s)	Notes
	Nesom, G. L. (2015). Key to native and cultivated species of <i>Erythrina</i> (Fabaceae) in the USA and comments on naturalization of <i>E. crista-galli</i> . <i>Phytoneuron</i> , 29, 1-8	"Sterile hybrid between <i>E. crista-galli</i> and <i>E. herbacea</i> . Spreading shrubs or small trees 2–4 meters tall, flowering while leafy, deciduous." [No seeds produced]

803	Well controlled by herbicides	
	Source(s)	Notes
	Weedbusters. (2019). Coral tree - <i>Erythrina x sykesii</i> . https://www.weedbusters.org.nz/weed-information/weed-list/coral-tree/ . [Accessed 2 Jul 2019]	[Control methods for <i>Erythrina x sykesii</i> might be effective on <i>Erythrina bidwillii</i> if needed] "What can I do to get rid of it?" 1. Bore and fill (all year round): make 1 hole every 150 mm around the trunk and fill or saturate each hole with 3g metsulfuron-methyl 600g/kg; or 20ml of a product containing 100g picloram+300g triclopyr/L. 2. Cut and squirt (all year round): make 1 cut every 100mm around the trunk and fill or saturate each cut with 2g metsulfuron-methyl 600g/kg; or 15ml of a product containing 100g picloram+300g triclopyr/L. 3. Frilling (all year round): ensure complete frill achieved and paint frills thoroughly with metsulfuron-methyl 600g/kg (5g /L) + penetrant; or a product containing 100g picloram+300g triclopyr/L (200ml/L)."
	USDA, ARS, Germplasm Resources Information Network. 2019. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html . [Accessed]	Unknown. No information found on herbicide efficacy or chemical control for his species.

804	Tolerates, or benefits from, mutilation, cultivation, or fire	
	Source(s)	Notes
	Llamas, K.A. 2003. <i>Tropical Flowering Plants</i> . Timber Press, Portland, OR	"Prune after flowering to encourage repeat blooming."

Qsn #	Question	Answer
	Dave's Garden. (2019). <i>Erythrina</i> Species, Fireman's Cap, Shrub Coral Tree. <i>Erythrina bidwillii</i> . https://davesgarden.com . [Accessed 3 Jul 2019]	[Suggests plants will resprout if cut back] "On Oct 21, 2007, duggiehoo from McDonough, GA (Zone 7b) wrote:" ... "It dies back in the winter but grows quickly after sprouting late in the spring"

805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	
	Source(s)	Notes
	Messing, R. H., Noser, S., & Hunkeler, J. (2009). Using host plant relationships to help determine origins of the invasive <i>Erythrina</i> gall wasp, <i>Quadrastichus erythrinae</i> Kim (Hymenoptera: Eulophidae). <i>Biological Invasions</i> , 11(10), 2233–2241	[Effects on <i>E. bidwillii</i> unknown] "The <i>Erythrina</i> gall wasp has recently invaded a wide swath of Asian and Pacific countries, causing severe damage to several species of <i>Erythrina</i> trees. It poses an imminent threat to native <i>Erythrina</i> species in Latin America, Asia, Australia and the Pacific. While an African origin of the pest is presumed, it's exact home on the continent remains unknown. We examined host plant relationships of the wasp using 71 of the world's species of <i>Erythrina</i> that are planted in the botanical gardens of Hawaii. Observational and experimental data indicate that species endemic to Africa are more resistant to the wasp than those from other continents. Complete absence of galling on all <i>Erythrina</i> native to Benin, Burundi, Congo, Gambia, Lesoto, Rwanda, and Somalia make those countries highly unlikely to be the origin of the wasp. Mozambique, South Africa, Swaziland, and Zimbabwe were also shown to be unlikely sources. We present susceptibility indices of all 71 <i>Erythrina</i> species, including a number of economically useful trees, and we provide a warning for several species of conservation concern...We found a wide range of susceptibility to gall wasp damage among Latin America's native <i>Erythrina</i> species (Appendix 1)."

Summary of Risk Traits:

High Risk / Undesirable Traits

- Grows in tropical climates
- Other *Erythrina* species have become invasive
- Some spines or thorns present on tree
- Unpalatable (deer resistant)
- Reported to be toxic to animals and people
- Tolerates many soil types
- N-fixing (modifies soil chemistry)
- Seeds dispersed by birds & intentionally by people
- Intentionally spread by people
- May resprout after cutting

Low Risk Traits

- No reports of invasiveness or naturalization outside native range
- Prefers full sun (dense shade may prevent any potential for spread into intact forests)
- A sterile hybrid unlikely to spread without human assistance
- Not reported to spread vegetatively