

**Family:** *Buddlejaceae*

**Taxon:** *Buddleja saligna*

**Synonym:** *Chilianthus arboreus* (L. f.) DC.  
*Scoparia arborea* L. f.

**Common Name** False Olive  
squarestem butterflybush

Questionnaire :	current 20090513	Assessor:	Chuck Chimera	Designation: L
Status:	Assessor Approved	Data Entry Person:	Chuck Chimera	WRA Score 2
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	y
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	?
301	Naturalized beyond native range		y = 1*multiplier (see Appendix 2), n= question 205	y
302	Garden/amenity/disturbance weed		n=0, y = 1*multiplier (see Appendix 2)	
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	n
402	Allelopathic		y=1, n=0	n
403	Parasitic		y=1, n=0	n
404	Unpalatable to grazing animals		y=1, n=-1	n
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	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	n
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	y
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	
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	y
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 2

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**Supporting Data:**

101	2010. WRA Specialist. Personal Communication.	No evidence that false olive is highly domesticated
102	2010. WRA Specialist. Personal Communication.	NA
103	2010. WRA Specialist. Personal Communication.	NA
201	2006. Stuart, D.D.. Buddlejaceae: Royal Horticultural Society plant collector guide. Timber Press, Portland, OR	"Buddleja saligna has a large distribution across South Africa, Natal, Orange Free State, and Transvaal northwards to Zimbabwe." [part of range extends north of the Tropic of Capricorn]
202	2010. WRA Specialist. Personal Communication.	Native range well documented
203	1993. McClintock, E.. Treatments from the Jepson Manual - Buddlejaceae. <a href="http://ucjeps.berkeley.edu/cgi-bin/get_JM_treatment.pl?2691,2692,2694">http://ucjeps.berkeley.edu/cgi-bin/get_JM_treatment.pl?2691,2692,2694</a>	Elevation: 200–700 m. [California]
203	2002. Johnson, D./Johnson, S.. Down to Earth: Gardening with Indigenous Trees. Struik Publishers, Cape Town, South Africa	"enjoys almost any climate except a cool wet summer."
203	2010. Dave's Garden. PlantFiles: Square-stemmed Butterfly Bush, False Olive Tree. Dave's Garden, <a href="http://davesgarden.com/guides/pf/go/110373/">http://davesgarden.com/guides/pf/go/110373/</a>	Hardiness: USDA Zone 7a: to -17.7 °C (0 °F) USDA Zone 7b: to -14.9 °C (5 °F) USDA Zone 8a: to -12.2 °C (10 °F) USDA Zone 8b: to -9.4 °C (15 °F) 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) [broad climate suitability across several plant hardiness zones]
204	2006. Stuart, D.D.. Buddlejaceae: Royal Horticultural Society plant collector guide. Timber Press, Portland, OR	"Buddleja saligna has a large distribution across South Africa, Natal, Orange Free State, and Transvaal northwards to Zimbabwe." [native range, in part, extends to areas with subtropical climate]
205	2010. WRA Specialist. Personal Communication.	Introduced to California and Australia. Possibly elsewhere.
301	2007. Randall, R.P.. The introduced flora of Australia and its weed status. CRC for Australian Weed Management, Glen Osmond, Australia	This plant has been recorded to escape from cultivation [Australia]
301	2010. Calflora. The Calflora Database - Buddleja saligna. <a href="http://www.calflora.org/cgi-bin/species_query.cgi?where-calrecnum=1223">http://www.calflora.org/cgi-bin/species_query.cgi?where-calrecnum=1223</a>	"Buddleja saligna, a dicot, is a shrub that is not native to California; it was introduced from elsewhere and naturalized in the wild. "
302	2007. Randall, R.P.. Global Compendium of Weeds - Buddleja saligna [Online Database]. Hawaii Ecosystems at Risk Project (HEAR), <a href="http://www.hear.org/gcw/species/buddleja_saligna/">http://www.hear.org/gcw/species/buddleja_saligna/</a>	Listed as a cultivation escape, and naturalized in California, but no evidence of negative impacts.
303	2007. Randall, R.P.. Global Compendium of Weeds - Buddleja saligna [Online Database]. Hawaii Ecosystems at Risk Project (HEAR), <a href="http://www.hear.org/gcw/species/buddleja_saligna/">http://www.hear.org/gcw/species/buddleja_saligna/</a>	No evidence of Buddleja saligna as a weed of agriculture, horticulture, or forestry.
304	2007. Randall, R.P.. Global Compendium of Weeds - Buddleja saligna [Online Database]. Hawaii Ecosystems at Risk Project (HEAR), <a href="http://www.hear.org/gcw/species/buddleja_saligna/">http://www.hear.org/gcw/species/buddleja_saligna/</a>	No evidence as an environmental weed.
305	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds.. CABI Publishing, Wallingford, UK	"Buddleja davidii...invasive because it quickly displaces primary native colonizers on fresh alluvial plains and accelerates succession to forests."
401	2002. <a href="http://www.plantzafrica.com">www.plantzafrica.com</a> . Buddleja saligna. South African National Biodiversity Institute, <a href="http://www.plantzafrica.com/plantab/buddlesalig.htm">http://www.plantzafrica.com/plantab/buddlesalig.htm</a>	"The false olive is a tree up to 10m tall in warm moist areas but usually 4 to 5 metres in Highveld areas. Its young stems are four angled and covered with white velvety hairs. The older stems and trunks are creamy or grey to dark brown and fluted with the bark peeling in longitudinal strips."
402	2010. WRA Specialist. Personal Communication.	No evidence of allelopathy
403	2006. Stuart, D.D.. Buddlejaceae: Royal Horticultural Society plant collector guide. Timber Press, Portland, OR	"large shrub to small tree' [not parasitic]

404	2003. Parker, D.M./Bernard, R.T.F./Colvin, S.A.. The diet of a small group of extralimital giraffe. African Journal of Ecology. 41(3): 245-253.	Consumed by giraffes
405	2003. Parker, D.M./Bernard, R.T.F./Colvin, S.A.. The diet of a small group of extralimital giraffe. African Journal of Ecology. 41(3): 245-253.	Consumed by giraffes [no evidence of toxicity to animals]
406	2006. Stuart, D.D.. Buddlejias: Royal Horticultural Society plant collector guide. Timber Press, Portland, OR	No evidence that this plant is an important host of pests or pathogens.
407	2006. Stuart, D.D.. Buddlejias: Royal Horticultural Society plant collector guide. Timber Press, Portland, OR	"In native medicine a decoction of the leaves is used to relieve coughs and colds. Scrapings of the root are taken as a purgative and to induce vomiting. Modern pharmacology companies are researching the medicinal properties of this species." [medicinal properties, but no evidence of toxicity or accidental poisoning]
408	2010. WRA Specialist. Personal Communication.	No evidence that Buddleja saligna creates a fire hazard in natural ecosystems
409	2010. Dave's Garden. PlantFiles: Square- stemmed Butterfly Bush, False Olive Tree. Dave's Garden, <a href="http://davesgarden.com/guides/pf/go/110373/">http://davesgarden.com/guides/pf/go/110373/</a>	Sun Exposure: Full Sun
410	2002. www.plantzafrica.com.. Buddleja saligna. South African National Biodiversity Institute, <a href="http://www.plantzafrica.com/plantab/buddlesalig.htm">http://www.plantzafrica.com/plantab/buddlesalig.htm</a>	"It will grow in most soils but added compost will improve performance."
410	2010. Africantrees.com. Buddleja saligna - False olive. <a href="http://www.africantrees.com/details.asp?treeID=18">http://www.africantrees.com/details.asp?treeID=18</a>	"It is drought and frost hardy, grows very fast and is not too particular about soil conditions."
411	2010. JSTOR Plant Science. Buddleja saligna. <a href="http://plants.jstor.org/taxon/Buddleja.saligna">http://plants.jstor.org/taxon/Buddleja.saligna</a>	"Shrub or small tree, 0-5-12 m. high, much branched." [does not have a climbing or smothering growth habit]
412	1997. Van Wyk, B./Van Wyk, P.. Field guide to trees of Southern Africa. Struik Publishers, Cape Town, South Africa	No evidence that tree forms dense thickets in native range.
501	2006. Stuart, D.D.. Buddlejias: Royal Horticultural Society plant collector guide. Timber Press, Portland, OR	Terrestrial
502	2006. Stuart, D.D.. Buddlejias: Royal Horticultural Society plant collector guide. Timber Press, Portland, OR	Buddlejaceae [now Scrophulariaceae]
503	2006. Stuart, D.D.. Buddlejias: Royal Horticultural Society plant collector guide. Timber Press, Portland, OR	Buddlejaceae [now Scrophulariaceae...not a Nitrogen fixing woody plant]
504	2006. Stuart, D.D.. Buddlejias: Royal Horticultural Society plant collector guide. Timber Press, Portland, OR	shrub to small tree [not a geophyte]
601	2008. Operation Wildflower. Buddleja saligna. <a href="http://www.operationwildflower.org.za/index.php?option=com_content&amp;task=view&amp;id=165&amp;showall=1">http://www.operationwildflower.org.za/index.php?option=com_content&amp;task=view&amp;id=165&amp;showall=1</a>	"Ecological rarity: Common, robust spontaneous propagation in some areas as a pioneer tree." [no evidence of substantial reproductive failure in native habitat]
602	2002. www.plantzafrica.com.. Buddleja saligna. South African National Biodiversity Institute, <a href="http://www.plantzafrica.com/plantab/buddlesalig.htm">http://www.plantzafrica.com/plantab/buddlesalig.htm</a>	"Buddleja saligna is easily grown from seed or cuttings. The seed is very fine and should be mixed with sand to obtain an even distribution. Sow in a good, fine seedling mix in seedling trays. To water after sowing, stand the tray in a clean, shallow container of water and allow to soak up into seed tray. Remove once the surface is wet. Germination may not take place all at the same time although most seed should have germinated after four weeks. Transplant into black bags, taking care to water well afterwards."
603	2010. WRA Specialist. Personal Communication.	Unknown if Buddleja saligna can hybridize naturally
604	2010. WRA Specialist. Personal Communication.	Unknown if B. saligna is self-compatible

605	2002. <a href="http://www.plantzafrica.com/">www.plantzafrica.com.</a> Buddleja saligna. South African National Biodiversity Institute, <a href="http://www.plantzafrica.com/plantab/buddlesalig.htm">http://www.plantzafrica.com/plantab/buddlesalig.htm</a>	"The large amounts of pollen and nectar it produces makes it popular with bee farmers." [likely bee-pollinated]
606	2002. Johnson, D./Johnson, S.. Down to Earth: Gardening with Indigenous Trees. Struik Publishers, Cape Town, South Africa	"Propagation: Seed or cuttings." [no evidence that plant spreads vegetative]
607	2002. Johnson, D./Johnson, S.. Down to Earth: Gardening with Indigenous Trees. Struik Publishers, Cape Town, South Africa	"Growth is quite rapid, at least 1 m per year, and flowering usually begins at two years."
607	2002. <a href="http://www.plantzafrica.com/">www.plantzafrica.com.</a> Buddleja saligna. South African National Biodiversity Institute, <a href="http://www.plantzafrica.com/plantab/buddlesalig.htm">http://www.plantzafrica.com/plantab/buddlesalig.htm</a>	"This fast growing tree is an excellent, quick screen plant. It grows up to 800mm per year. Use it as a pioneer tree for your forest garden. It also makes a very good clipped hedge. "
607	2010. <a href="http://www.africantrees.com/">Africantrees.com.</a> Buddleja saligna - False olive. <a href="http://www.africantrees.com/details.asp?treeID=18">http://www.africantrees.com/details.asp?treeID=18</a>	"When in full flower, normally after its 3rd year, it makes a stunning display in the garden."
701	2010. WRA Specialist. Personal Communication.	No evidence that small seeds are dispersed unintentionally, but the possibility exists for inadvertent transport
702	2010. Dave's Garden. PlantFiles: Square-stemmed Butterfly Bush, False Olive Tree. Dave's Garden, <a href="http://davesgarden.com/guides/pf/go/110373/">http://davesgarden.com/guides/pf/go/110373/</a>	Grown ornamentally
703	2010. WRA Specialist. Personal Communication.	No evidence of produce contamination, and not grown with other crops.
704	1993. Geldenhuys, C.J.. Floristic composition of the southern Cape forests with an annotated check-list. South African Journal of Botany. 59(1): 26-44.	"Buddleja saligna, Cunonia capensis and Nuxia floribunda have very small seeds which can drift in the wind over short distances."
704	2006. Global Invasive Species Database. Buddleja davidii. National Biological Information Infrastructure (NBII) & IUCN/SSC Invasive Species Specialist Group (ISSG), <a href="http://www.issg.org/database/species/ecology.asp?fr=1&amp;si=650">http://www.issg.org/database/species/ecology.asp?fr=1&amp;si=650</a>	With maturity, fruit split in two and release many seeds (3 million seeds per annum per seedling) which are transported long distances by wind, water or motor vehicles. [This is a description of Buddleja davidii, which has small seeds similar to B. saligna]
704	2008. Operation Wildflower. Buddleja saligna. <a href="http://www.operationwildflower.org.za/index.php?option=com_content&amp;task=view&amp;id=165&amp;showall=1">http://www.operationwildflower.org.za/index.php?option=com_content&amp;task=view&amp;id=165&amp;showall=1</a>	Description of seed/fruit: Small, ovoid, hairy capsule, 2 mm in length, containing very small seeds [small seeds probably enable wind dispersal, as in other Buddleja species]
705	2010. WRA Specialist. Personal Communication.	No evidence that small seeds are dispersed by water in native or introduced range.
706	2010. JSTOR Plant Science. Buddleja saligna. <a href="http://plants.jstor.org/taxon/Buddleja.saligna">http://plants.jstor.org/taxon/Buddleja.saligna</a>	"Capsule oblong, often laterally, compressed, 1.5–2.5 x 0.8–1.2 x 0.8–1 mm., sparsely lepidote, about twice as long as the calyx, 2 (later 4-)valved. Seeds medium brown, obliquely tetrahedral or nearly fusiform, 0.9–1.3 x 0.4–0.6 x 0.2–0.4 mm., obscurely winged or not, minutely reticulate." [not fleshy-fruited, and no evidence of dispersal by birds]
707	2010. WRA Specialist. Personal Communication.	No evidence of external dispersal by animals, and no means of external attachment.
708	2010. WRA Specialist. Personal Communication.	Unknown if seeds survive passage through gut, but unlikely to be consumed.
801	2008. Operation Wildflower. Buddleja saligna. <a href="http://www.operationwildflower.org.za/index.php?option=com_content&amp;task=view&amp;id=165&amp;showall=1">http://www.operationwildflower.org.za/index.php?option=com_content&amp;task=view&amp;id=165&amp;showall=1</a>	Description of seed/fruit: Small, ovoid, hairy capsule, 2 mm in length, containing very small seeds [numbers of seed produced unknown]
802	2010. WRA Specialist. Personal Communication.	Longevity of soil seed bank unknown
803	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds.. CABI Publishing, Wallingford, UK	"If established plants are removed, the stumps should be either removed as well or treated with a glyphosate herbicide, because the shrub can regrow from the roots if cut." [The invasive Buddleja davidii can be controlled with herbicides; likely that similar herbicide treatments will be effective on Buddleja saligna]
805	2010. WRA Specialist. Personal Communication.	Unknown

