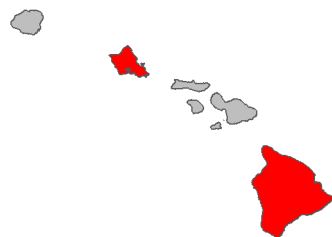


Fire risk report for *Urtica urens*

Full Species Name <i>Urtica urens</i> L.	0 .51 Lowest risk ⇔ Highest risk																	
Family: Urticaceae	This species is likely a high fire risk in Hawai'i with a fire risk score of 0.50 .																	
Common names: dwarf nettle burning nettle dog nettle	This species was ranked by our machine learning algorithm using the data presented on the next page. A predicted score of > .34 suggests the plant is a high fire risk.																	
Synonyms:																		
Known occurrences (as of 2020) 	<table><tr><th colspan="2">Summary of Fire ecology</th></tr><tr><td>Native habitat fire proneness</td><td>No Data</td></tr><tr><td>Fire promoting plant in its native range</td><td>No</td></tr><tr><td>Fire promoting plant in its introduced range*</td><td>No</td></tr><tr><td>Regenerates after fire</td><td>Yes</td></tr><tr><td>Promoted by fire</td><td>No Data</td></tr><tr><td>Reported flammable*</td><td>High</td></tr><tr><td>Relative is flammable*</td><td>No</td></tr></table>		Summary of Fire ecology		Native habitat fire proneness	No Data	Fire promoting plant in its native range	No	Fire promoting plant in its introduced range*	No	Regenerates after fire	Yes	Promoted by fire	No Data	Reported flammable*	High	Relative is flammable*	No
Summary of Fire ecology																		
Native habitat fire proneness	No Data																	
Fire promoting plant in its native range	No																	
Fire promoting plant in its introduced range*	No																	
Regenerates after fire	Yes																	
Promoted by fire	No Data																	
Reported flammable*	High																	
Relative is flammable*	No																	
Year first documented as naturalized in Hawai'i: 1938																		
This species has been ranked by the Hawai'i Weed Risk Assessment program as High Risk with a score of 11.																		
View photos on Starr Environmental																		
View on Wikipedia																		
View occurrences on iNaturalist																		
View at Plants of Hawaii																		
View photos on Flickr																		

*These values were used by the model to predict fire risk

*These values were used by the model to predict fire risk

Detailed summary of Fire Ecology

Native habitat fire proneness (In any part of the plant's native range is its habitat described as fire prone due to natural or human caused fires?)	No Data	
Fire promoting plant in its native range (Does the species act as a major fuel source, increase fire severity, frequency, or modify fuel bed characteristics within its native range?)	No	No Data
Fire promoting plant in its introduced range (Same as Fire Promoting Native but within the species introduced range)	No	
Regenerates after fire (Does the plant regrow after fire by any means? This includes resprouters, reseeder, and recruiters which dispersed into the area within approximately one year post fire)	Yes	"Regrows from seed post fire" http://www.environment.sa.gov.au/files/sharedassets/public/fire_management/fire-management-plan-flinders-chase-plan.pdf Area, C. B. W. P., & Park, K. H. C. (2009). Fire Management Plan Flinders Chase Fire Management Plan
Promoted by fire (Does the plant increase in abundance after a fire?)	No Data	
Reported flammable (Is the species described as being flammable, being a major wildfire fuel, or high fire risk?)	High	Listed under the "FIRE PRONE PLANT SPECIES (MANDATORY REMOVAL)" list in Attachment 7. https://www.ocfa.org/Uploads/SafetyPrograms/OCFA%20RSG%20-

		%20Vegetation%20Management%20Technical%20Design.pdf Orange County Fire Authority Vegetation Management Guideline Technical Design for New Construction January 1, 2014 Fuel Modification Plans and Maintenance Program
Relative is flammable (Does a plant in the same genus meet the Reported Flammable criteria?)	No	"FIRE ECOLOGY OR ADAPTATIONS : Stinging nettle survives fire by sprouting from rhizomes. Removal of litter by fire may encourage stinging nettle growth and provide suitable germination sites for seed. However, frequent fire during the growing season may reduce stinging nettle [43]." https://www.fs.fed.us/database/feis/plants/forb/urtdio/all.html#FIRE%20ECOLOGY

Text in quotes are direct quotes from the source

Text in square brackets was added by the assessor to clarify something or to summarize from a figure.

Text preceded by a “#” is comment from the assessor

The data presented were assembled from literature and database searches for each species using as much data as could be collected regarding the plant’s fire ecology under natural conditions. Searches aimed to be exhaustive and consist of as much data as could be located in 2020. Our machine learning algorithm was trained on 49 species of plants which had their fire risk ranked by 49 managers in Hawai’i in November 2020. The model used a conditional random forest regression algorithm to predict scores for each species using the manager score as the response variable and the fire ecology traits of each plant as the predictor variables to generate a fire risk score. This trained model was then used to predict the fire risk for all species which were not ranked by managers. The model was calibrated such that it is 90% accurate at predicting high fire risk plants and 79% accurate at predicting low fire risk plants. This research and the resulting fire risk model has been published in the journal [Biological Invasions](#) by [Kevin Faccenda](#) and [Curt Daehler](#) (both at the University of Hawai’i at Mānoa).

Note that the analysis doesn’t account for a plant species’ spatial distribution, population density, or distinct climate and ecosystem conditions (which can also influence fire risk). The fire risk of these species are mostly under “worst case” environmental conditions where the climate is dry enough to maintain fire, but wet enough to allow for plant growth and fuel accumulation. The fire risk ranking should not be taken as a stand-alone risk metric in prioritizing weed control efforts. Rather, this information may also be useful for determining if a newly discovered species poses a potential fire threat in wildland areas.

More general information on the weed risks and ecology of non-native plants in Hawai’i is available from the Hawai’i Invasive Species Committee’s [Weed Risk Assessment database](#).

View more fact sheets at <https://www.pacificfireexchange.org/weed-fire-risk-assessments>

Fact sheet prepared by Kevin Faccenda (faccenda@hawaii.edu) in November 2021. Data were prepared by Kevin Faccenda in 2020.

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