

Cabbage Tree (*Cordyline australis*) Distribution and Management in California State Parks



Ramona Robison¹ and Chris Heintzelman²
California Department of Parks and Recreation

1. Natural Resources Division, Sacramento; Ramona.Robison@parks.ca.gov, and
2. Russian River District, 25381 Steelhead Blvd., Duncans Mills, CA 95430; Chris.Heintzelman@parks.ca.gov

Abstract

Cabbage tree (*Cordyline australis*) has begun to invade the understory of the bishop pine forest and riparian zones within Salt Point State Park, Sonoma County, CA. It appears to be radiating out from historical plantings through bird-mediated seed dispersal. Since this plant has a limited distribution on our lands at the moment, Parks staff have prioritized its removal. Methods used for management include foliar herbicide application, cut stump and herbicide application with EZ-Ject lance cartridges. Removal began in December 2013 and will continue to help determine the most effective long-term methods for removal of this species.



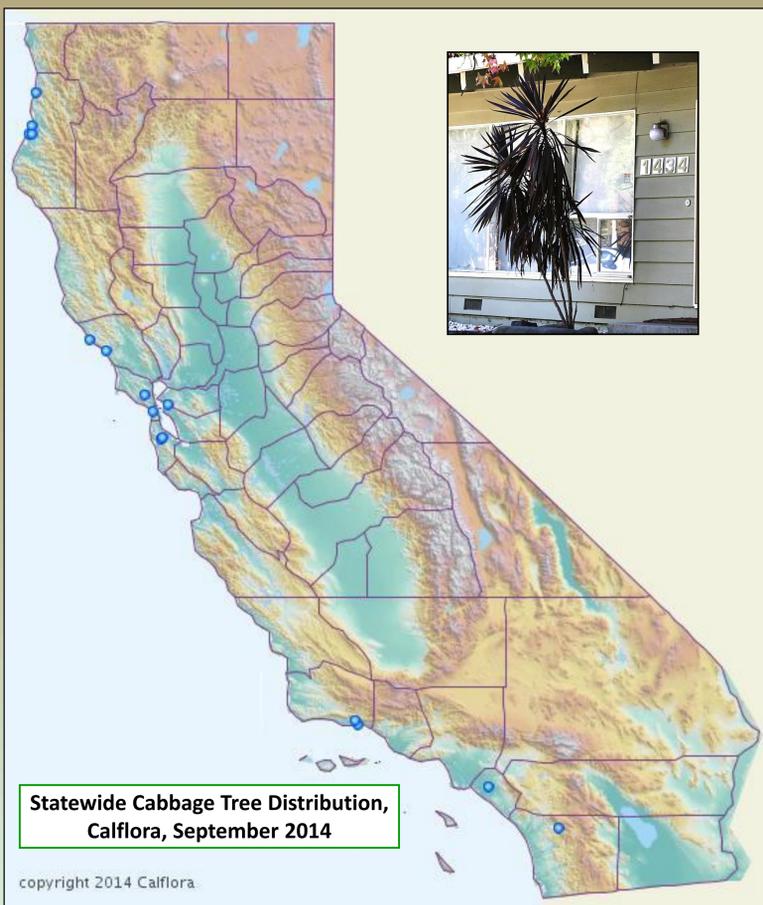
Cabbage Tree Growing in a Sacramento Landscape



Cabbage Tree Growing in Oak Woodland Understory, Marin County

Introduction

The *Cordyline* genus contains 15 species and is native to Australia and New Zealand. Cabbage tree (*Cordyline australis*) is native to New Zealand and is naturalized in the North Coast, Central Coast, and Peninsular Ranges of California (Baldwin et al. 2012). The tree's seeds are contained in blue or bluish-white berries that are distributed by birds. Most of the collections of this plant in the wild in the Consortium of California Herbaria are after 2000. They are incidental reports associated with historical landscape plantings and do not appear to be spreading into wildlands. Only two locations in California are known to be spreading: Salt Point State Park (SP) in Sonoma County and Redwood National Park in Humboldt County.



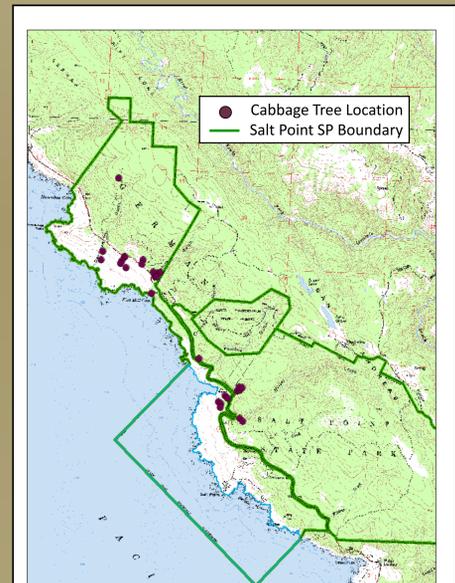
Cabbage Tree Close-Up



Cabbage Tree Habitat in Salt Point SP, June 2013

Cabbage Tree in Salt Point SP

Cabbage tree has begun to invade the understory of the bishop pine forest and riparian zones found within Salt Point SP. It appears to be radiating out from historical plantings located near Highway 1 at the approximate site of an old Wells Fargo station. Much of the cabbage tree distribution appears to be in isolated drainages away from historic plantings. This distribution has led State Parks staff to conclude that birds are, at least in part, responsible for the spread. Since this plant has a limited distribution on our lands and is spreading, Parks staff have prioritized its removal.



Cabbage Tree Locations in Salt Point SP, 2014

Cabbage Tree Management Methods

Cabbage tree removal began in 2013 and three chemical treatments have been tried with varying degrees of success. Foliar application has been used on small plants (< 2 feet tall) while cut stump and the EZ-Ject lance with cartridges of glyphosate has been used on mature plants. Foliar spraying gave modest success as the leaves shed moisture very effectively. Cut stump treatments induced sprouting from the base of the plant. One 8 foot long stalk re-sprouted into 6 individuals. Treatment with the EZ-Ject lance glyphosate cartridges appears to be the most effective. They deliver a precise dose of herbicide into the trunk of the plant, and no re-sprouting has occurred. Treatment with EZ-Ject lance glyphosate cartridges began in December 2013 and will continue into the fall to help determine the most effective treatment timing.



Cabbage Tree 6 Weeks After Treatment with EZ-Ject Lance Glyphosate Cartridge

Discussion

We are interested in more information on the distribution of this plant in natural areas throughout California since it is widely available in the horticultural trade, and is not reported naturalizing elsewhere.

References

- Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. The Jepson manual: vascular plants of California, second edition. University of California Press, Berkeley.