

Middle Elevation Forest: Chinquapin Band

Chinquapin / Sunyithih / *Castanopsis chrysophylla*



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Cultural Importance

The nuts of sunyithih are among the various tree fruits important to the Karuk traditional diet (Schenck and Gifford 1952).

Life Cycle & Habitat

Sunyithih is an evergreen member of the beech family that can grow up to 80 ft tall and live up to 500 years. The tree's fruit ripens the second autumn after pollination, and consists of one to three nuts encased in a spiny bur. Sunyithih is particularly competitive in dry, infertile sites. On sites with more moisture and fertile soil conditions, disturbance such as fire is necessary to preserve a chinquapin forest component. Rarely does chinquapin occur in pure stands (OWIC II 2016). The rotten wood areas of the tree's trunk and larger limbs may be burned and cleaned out forming wildlife dens (e.g. fisher, raccoon, etc.).

Sunyithih and Fire

While sunyithih is highly competitive as an early succession species and on sites that may be too harsh for the success of other species, it requires disturbance in order to remain competitive on more fertile, moist sites. As such, chinquapin may benefit from a fire regime that will restore its competitiveness among other species. (OWIC II 2016)

Effects of High Severity Fire Across Time

Immediate	2-Year	Long-Term
<ul style="list-style-type: none"> High intensity fire could kill older tree specimens that reliably produce fruit and wildlife den habitat 	<ul style="list-style-type: none"> General reduction in nuts and loss of den/cavity areas for wildlife 	<ul style="list-style-type: none"> If mature single to multiple trunked trees are burned too frequently then the bushy growth multiple stem growth from will be more abundant reducing dens/cavities.
Sources: Donato et al. 2009	Sources: Donato et al. 2009	Sources: Donato et al. 2009

Effects of Karuk Cultural Burning Across Time

Immediate	2-Year	Long-Term
<ul style="list-style-type: none"> Cultural burning can introduce beneficial disturbance into a site while preserving older, nut-bearing specimens 	<ul style="list-style-type: none"> Reduced understory fuel loads (surface and ladder) improve tribal and wildlife access and foraging to nuts and understory vegetation 	<ul style="list-style-type: none"> Routine, cultural burning in stands with old chinquapins reduces competition and keeps a chinquapin component in the forest.
Sources:	Sources: Lake 2013	Sources:

Effects of Federal Fire Management Strategies on Species' Climate Change and Fire Resilience

Prior to Fire	During Fire	After Fire
<ul style="list-style-type: none"> Suppression limits the disturbance that is necessary to keep a chinquapin component in high quality forests 	<ul style="list-style-type: none"> Agency burnouts or higher intensity fires reduce suitable live and dead trees with dens/cavities for wildlife. 	<ul style="list-style-type: none"> Tree growth from is transformed to more brushy multi-stem growth and nut production potential is reduced.
Sources: OWIC II 2016	Sources:	Sources: Donato et al. 2009