

Middle Elevation Forest: Chinquapin Band

Black Tailed Deer / Púfich / *Odocoileus hemionus*



Photo: Dr. Madeline Kalbach, fws.gov

Cultural Importance

Púfich is among the most important traditional Karuk foods and sources of utilitarian and ceremonial items. In 2005, over 65% of Karuk households reported hunting púfich for food (Norgaard 2005). The meat, sinew, bones, hide/skin, fur, antler, and hooves have been used extensively for traditional functions from tools to regalia.

Life Cycle & Habitat

Púfich has a home range in response to available resources, often influenced by fire severity burn patterns. Fire created edge habitats (pyroecotones) provide opportunities for varied forage as well as cover. The púfich diet is comprised of the tender shoots of various woody species, tree lichens, forbs (particularly in spring and summer), acorns, and fungi. Mating takes place in fall, after which does give birth to one or two fawns in the spring. (Innes 2013)

Púfich and Fire

Púfich is a fire-dependent species. Fire not only leads to higher nutrient content in forage, it can promote a landscape mosaic of severity patches that makes for suitable deer habitat. However, high-intensity, large-scale severity fire may reduce the mosaic composition and make large swaths of land unusable by deer. (Innes 2013, Karuk DNR 2010)

Effects of High Severity Fire Across Time

Immediate	2-Year	Long-Term
<ul style="list-style-type: none"> High severity, large-scale fire may burn a significant portion of black-tailed deer's home range Oak groves burned by high-intensity fire can reduce deer diets rich in acorns 	<ul style="list-style-type: none"> If soil moisture is available, resprouting foliage is viable forage. Extensive high severity burns reduce habitat and increase vulnerability to predators. 	<ul style="list-style-type: none"> Smaller patches of high severity fire that maintain more open shrub, fern, forb, and grasses promote higher quality forage and dispersal for deer.
Sources: Innes 2013	Sources: Lake per obs.	Sources: Dasmann and Dasmann 1963

Effects of Karuk Cultural Burning Across Time

Immediate	2-Year	Long-Term
<ul style="list-style-type: none"> Low-intensity fire can release soil nutrient productivity that promotes nut crops, fruits, greens and shoots that are important food sources for deer 	<ul style="list-style-type: none"> Coniferous encroachment of meadows and forest openings is controlled, protecting foraging habitat with cover/protection. Increase acorn (reduced pests) and browse plants quality. 	<ul style="list-style-type: none"> Promotes landscape ecological diversity and productivity that benefit deer at individual, herd, and population scales.
Sources: Karuk DNR 2010	Sources: Kremaster and Bunnell 1992, Lake 2007, 2013m Busum 2006	Sources: Lake 2013, Dasmann and Dasmann 1963

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 leads to declines in forage quantity and quality, leading to púfich declines. 	<ul style="list-style-type: none"> Burnout/back burn operational fires can kill deer if can't escape. Fire suppression or repair activities disrupt or disturb deer. 	<ul style="list-style-type: none"> Burn Area Emergency Repair post-fire treatments may disrupt deer foraging, travel/access desired habitats.
Sources: Karuk DNR 2010, Garton et al. 1976	Sources: Lake Pers. obs.	Sources: Grifantini et al. 1992