

Dennis C. Odion, Chad T. Hanson, André Arsenault, William L. Baker, Dominick A. DellaSala, Richard L. Hutto, Walt Klenner, Max A. Moritz, Rosemary Sherriff, Thomas T. Veblen, Mark A. Williams. Examining historical and current mixed-severity fire regimes in ponderosa pine and mixed-conifer forests of western North America.

TABLE S1. Evidence of historic fire severity in ponderosa pine and mixed-conifer forests of western North America. A summary of published studies and historical documents that provide evidence regarding mixed-severity fire in the ponderosa pine and mixed-conifer forests of western North America, but do not provide sufficient information to estimate high-severity fire rotations, or were conducted in smaller landscapes. Many fire scar studies have also been done in these forests, but fire scars alone are not sufficient to distinguish low- from mixed-severity regimes.

Location		Source		Description of high-severity fire evidence
	California	[79]	Low-mid elevation montane conifer forests	Monograph of the effects of fire on timber resources. Abundant descriptions and photos showing extensive areas of forests converted to chaparral by fire in the early 1900s, including some high-severity fire patches hundreds, and thousands, of ha in size within ponderosa pine and mixed-conifer forest.
	Sierra Nevada	[82]	Lower to upper montane forests	Comprehensive report to Congress on the status of the Sierra Nevada by numerous scientists contains an “Alternative View” that “stand-threatening” fires were not rare or uncommon but were probably more frequent than commonly assumed as a result of combinations of prolonged drought, an accumulation of dead material from natural causes and severe fire weather. It further points out that “in the words of John Muir, ‘there was a mix of dark, dense, or thick forests in unknown comparative quantities’” and cites a detailed diary which recorded dense conditions six times more often than the open conditions associated with frequent surface fire.
	Sierra Nevada	[20,86]	White fir, Ponderosa pine	Large amounts of chaparral in landscape were created by historical high-severity fires.
	Sierra Nevada	[81]	Giant Sequoia and mixed-conifer forests	High-severity patches beneficial for Giant Sequoia reproduction. Large stand-replacing fires are not unprecedented.
			Mixed-conifer,	The current fire regime with a stand-initiating rotation of ~200 years is 2 presumed to be similar to the historical one because fires have been allowed to

¹The current fire regime in the 15 km² study is presumed to be similar to the historical one because fires have been allowed to burn since 1974.

²A 20 km² study area located in remnant, unlogged old-growth.

Additional References

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