

FOMES ANNOSUS IN GIANT SEQUOIA

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Uprooting of giant sequoias (Sequoia gigantea) is a persistent problem in Sequoia, Kings Canyon, and Yosemite National Parks. Uprooting, while relatively infrequent, can be hazardous to visitors and can result in the loss of specimen trees that required centuries to grow. Because of concern expressed by park managers and the public, studies on the underlying causes of uprooting and structural failure in giant sequoia were undertaken. During these investigations, sporophores of Fomes annosus (Fr.) Cke. were found growing (either resupinately under the bark or as "conks" on bark or wood exposed at breaks) on 7 of 20 fallen sequoias with root or butt failure. Sporophores were associated with white, spongy saprot to somewhat stringy, light-brown rot in the butt or roots. An additional nine trees had similar decay but did not have sporophores. Thus, 16 of 20 failures in giant sequoia were associated with F. annosus or with decay resembling that of F. annosus.

Baxter (1), Sinclair (6), Hepting (3), and the Index of Plant Diseases in the United States (7) list giant sequoia as a host for F. annosus, but none cites or describes original observations or indicates possible prevalence. The presence of sporophores and/or decay in roots and butts of 16 of 20 uprooted trees suggests that F. annosus (and possibly other decay fungi) may be an important factor in the loss of giant sequoias, and that the belief that mature giant sequoias have few natural enemies other than fire, lightning, or high centers of gravity (2, 4, 5, 8) may not be accurate.

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