RESEARCH NOTES
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FIRE PREVENTION EFFORTS PAY OFF IN THE NORTHEAST

The frequency of forest fires in 13 northeastern states dropped about one-half from 1943 to 1950, exclusive of the fluctuations due to weather. The average downward trend and the annual observations from which the trend is determined are shown graphically in the lower chart on the other side of this page. Each dot on the chart is the ratio of fire occurrence (actual number of fires that burn) to fire expectance (number of fires proportional to measured fire danger). By transforming the data in the upper chart to a ratio, the effects of weather are largely eliminated from comparisons between years on the same area, and the error owing to differences in population, fuel types, land use, and other factors in comparisons between areas also is greatly reduced.

The decline in frequency of forest fires is common to most of the states, particularly during the last 5 years of the period. During these postwar years there was a downward trend in eleven states, very little change in one, and a moderate increase in another. The decline was sharpest in the following states, in the order listed:

Kentucky
Pennsylvania
Virginia
Connecticut
West Virginia

The degree of change varies by states but there is no indication that the location of a state affects the trend. There are differences between states because each state places a different amount of emphasis on fire prevention, employs different methods and techniques in preventing fires, and faces different fire prevention problems. However, variations are not extreme, so the data may be pooled to make up a regional picture, as has been done in the figure.

The regional observations form a relatively orderly pattern around the average trend line with small deviations predominating. Hence, it may be inferred with some confidence that the downward trend is a caused effect rather than a happenstance. The most rational explanation in view of no significant population change, particularly no decrease, is that money spent for organized and sustained fire prevention programs is buying a significant reduction in the frequency of forest fires.

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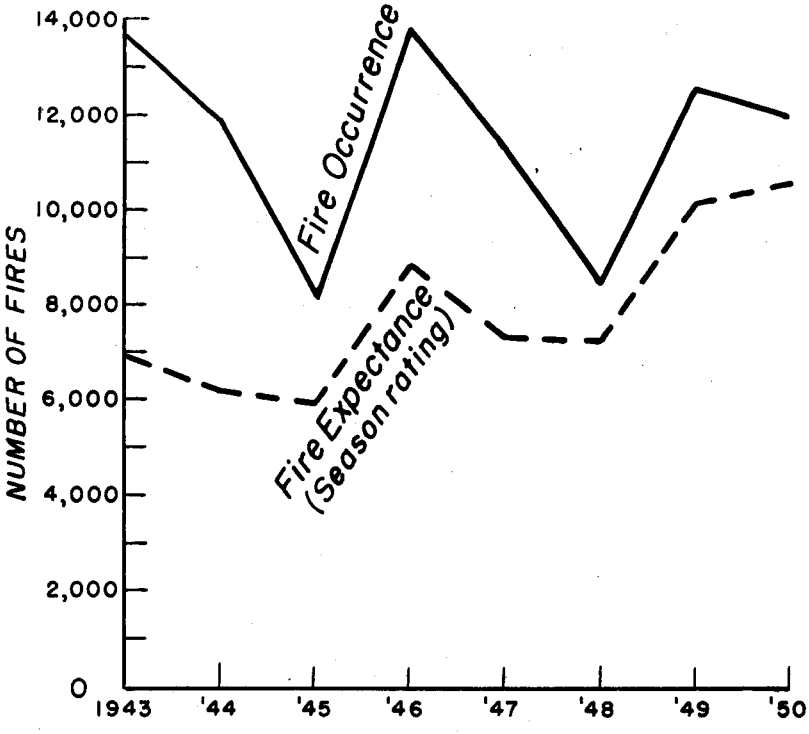

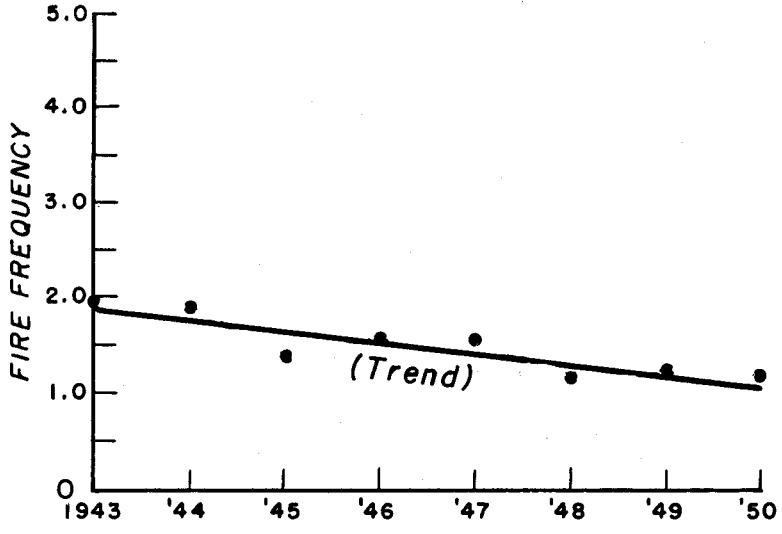

Fire frequency is the ratio of fire occurrence to fire expectance.