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FOREST FIRES IN THE BAIKAL REGION, EASTERN SIBERIA, RUSSIA

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ABSTRACT

The history of forest fires for six areas of mixed pinewoods in the Baikal region (Eastern Siberia, Russia) was reconstructed. We found traces of 56 forest fires (fire scars) which occurred in the past four centuries. Besides the fire scars on the trees we also used the reduced growth of the trees after a forest fire. On the basis of these investigations we found sixteen periods of important fire activity from 1669 to 2003. The mean time interval of the fires varies from 11 to 20 years depending on the forest type and human activity. Whereas in the 18th century the mean time interval between two fires was 19.25 years, it was only 11.75 years in the 20th century. Based on the correlation and spectral analysis, the occurrence of forest fires depend strongly on the precipitation during May and June. For these precipitations are found the major cycle with the duration of 60 (61-62) years. This agrees well with the occurrence of forest fires in the 20th century.

Key words: Eastern Siberia, Russia, Southern Baikal region, forest fires.