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Holocene fire history of the southern Lake Baikal region

Marianne Vogel^{1,2}, Chéïma Barhoumi¹, Hanane Limani¹, Sébastien Joannin¹, Odile Peyron¹, and Adam Ahmed Ali¹

¹ISEM, Université de Montpellier, Montpellier, France

²École d'études autochtones, UQAT, Rouyn-Noranda, Canada

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The catastrophic fire years that have taken place during the last decade in Siberia and in the boreal forests in general, directly linked to global warming, have had dramatic repercussions on the human populations of these regions. Past fire reconstruction studies are currently the only way to study the past dynamics of these fires and to understand their link with climate, vegetation and human activities. However, few studies of the dynamics of these fires are available in Siberia, and none have been carried out on the scale of the Holocene. This study aims to present the first reconstruction of the fire history during the Holocene based on sedimentary charcoals from two lakes localised on the southern shore of Lake Baikal, in Siberia. Two lakes have been sampled, Lake Ébène and Lake Jarod. The results showed a similar trend between the two lakes, with severe and intense crown fires during the early Holocene and less severe surface fires after 6 500 cal. yr BP. According to pollen reconstructions carried out near the studied lakes, a vegetation transition occurred at the same time. *Picea obovata* was dominant during the early humid Holocene. After 6 500 cal. yr BP, conditions were drier and *Pinus sylvestris* and *Pinus sibirica* became the dominant species. Over the past 1 500 years, the greater presence of human populations has firstly resulted in an increase of the fire frequency, then probably in its maintenance after 600 cal. yr BP in lake Ébène and to finish, in its suppression after 900 cal. yr BP in Lake Jarod. The decrease of fire frequency at the end of the 20th century could be explained by new fire management policies.