

ANALYSIS OF SUMMER AIR TEMPERATURE REGIME IN SPRUCE FORESTS IN THE KOPAONIK NATIONAL PARK, SERBIA

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Abstract

This paper presents the results of the analysis of the summer air temperature regime in the spruce forest in the Kopaonik National Park, as well as the results of the comparative analysis of the summer temperature conditions in the spruce forest and in the open space. A comparative analysis of average, minimum and maximum temperatures during the summer season (June, July and August) in the period 2012-2018 for two weather stations in the Kopaonik National Park was performed: automatic weather station in a spruce stand (ICP Forests - International Cooperative Programme on Forest Condition Monitoring in Europe - Level II sample plot) and the main weather station Kopaonik located in the open space. The average temperatures in all summer months were lower in the spruce forest compared to the average temperatures in the open space. The average summer temperature in the spruce forest was 13.0°C and compared to the open space it was lower by 0.4°C. The average minimum and maximum temperatures in all summer months were also significantly lower in the spruce forest compared to the open space. The average minimum summer temperature in spruce forest was 8.5°C and it was lower by 0.6°C compared to the average minimum summer temperature in the open space. The average maximum summer temperature in spruce forest was 17.5°C and it was lower by 0.6°C compared to the average maximum summer temperature in the open space. The obtained results indicate that in spruce forest temperatures are lower during summer, as well as that the stand canopy has the potential to mitigate summer temperature extremes.

Keywords: *air temperature, summer, spruce forests, Kopaonik, Serbia.*