Outbreak of spruce bark beetle *Ips Typographus L.* in 2010–2014 and protection of spruce stands

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Last I. typographus, mass outbreak and related spruce stand dieback went on within typical for these events 5 year period from 2010 till 2014 [1]. Is was found across the whole drought zone in the central Russian regions and adjacent areas of south taiga, Cis-Ural and south Ural.

I. typographus, mass outbreak subsequently went through all stages – 1st or population growth (till 2010, May, June 2010), 2nd of maximum population (July, August 2010 – May, June 2013) and 3rd crisis stage (July, August 2013 and 2014).

The highest growth of I. typographus outbreaks and maximum spruce forest dieback was observed in 2012. In the mean time in some areas due to feeding supply depletion beetle migration to another feed species pine was found. Spruce bark beetle attacks of pine had no sufficient prospects and was not identified already in 2013.

I. typographus 1st primary and sister generations that infested spruce in May, June were crucial in spruce decline. Thus the most forest protection effect in this bark beetle control can be provided in this pest elimination during this period.

Survey of last I. typographus mass outbreak with regard to assessment silvicultural operation and weather condition impacts [2, 3] on spruce forest condition enabled to add and extend integrated operation package to raise spruce stand resilience. The proposed package includes sanitary prevention , silvicultural and sanitary recovery operations. Only integration of silvicultural and forest protection operations can maximally enable maintenance of spruce forest resilience and the pest population control [4, 5].

Referens

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