



# THE LABORATORY OF TREE-RING RESEARCH

presents a talk by

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## *Bark Beetle Outbreak Reconstructions from the Spruce Forest of the Tien Shan Mountains, Kazakhstan*

Wednesday, October 7, 2015 - 12:00pm to 1:00pm

Room: Bannister 110

Schrenk's spruce has a relatively isolated distribution in central Asia and is only distantly related to other Eurasian spruces. Its primary bark beetle is *Ips hauseri*, a bark beetle capable of multiple generations per year. Neither tree nor insect species are well studied, and the outbreak dynamics in Kazakhstan are unknown. In spring of 2011 high-severity wind storms devastated portions of the Tien Shan spruce forest, events known to trigger bark beetle outbreaks in spruce forests. We used tree-ring analyses to determine the frequency of disturbance events, particularly bark beetle outbreaks, since the early 1800s in the Tien Shan spruce forest. Tree-ring evidence suggests that only localized, low-severity bark beetle events have occurred during the reconstructed period 1820-2012, but that disturbance frequency doubled after about 1685. Disturbances were associated with steep slopes and high stand densities. Disturbance history did not affect the severity of blowdown damage in 2011. Approximately the first 10 minutes of the seminar will be a travelogue.