

Attributes Associated With Probability of Infestation by the Piñon Ips, *Ips confusus*, (Coleoptera: Scolytidae) in Piñon Pine, *Pinus edulis*

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Abstract—We examined attributes associated with the probability of infestation by piñon ips (*Ips confusus*), in piñon pine (*Pinus edulis*), in an outbreak in the Coconino National Forest, Arizona. We used data collected from 87 plots, 59 infested and 28 uninfested, and a logistic regression approach to estimate the probability of infestation based on plot- and tree-level attributes. Piñon pine stand density index was a good predictor of the likelihood of infestation by piñon ips at the plot level and a cross-validation analysis indicated that the model correctly classified 82% of the cases. Diameter at root collar and piñon dwarf mistletoe infestation level were good predictors of individual tree infestation and a cross-validation analysis indicated that the model correctly classified 72% of the cases. Results suggest that the occurrence of piñon ips infestations may be related to stress factors associated with increased stocking and piñon dwarf mistletoe infestations.

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