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The Influence of Forest Management Histories on Dead and Habitat Trees in the Old Growth Forest in Northern Iran

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Abstract : Dead and habitat tree such as fallen logs, snags, stumps and cracks and loos bark etc. is regarded as an important ecological component of forests on which many forest dwelling species depend, yet its relation to management history in Caspian forest has gone unreported. The aim of research was to compare the amounts of dead tree and habitat in the forests with historically different intensities of management, including: forests with the long term implication of management (PS), the short-term implication of management (NS) which were compared with semi virgin forest (GS). The number of 405 individual dead and habitat trees were recorded and measured at 109 sampling locations. ANOVA revealed volume of the dead tree in the form and decay classes significantly differ within sites and dead volume in the semi virgin forest significantly higher than managed sites. Comparing the amount of dead and habitat tree in three sites showed that dead tree volume related with management history and significantly differ in three study sites. Also, the numbers of habitat trees including cavities, Cracks and loose bark and Fork split trees significantly vary among sites. Reaching their highest in virgin site and their lowest in the site with the long term implication of management, it was concluded that forest management cause reduction of the amount of dead and habitat tree. Forest management history affect the forest's ability to generate dead tree especially in a large size, thus managing this forest according to ecological sustainable principles require a commitment to maintaining stand structure that allow, continued generation of dead tree in a full range of size.

Keywords : forest biodiversity, cracks trees, fork split trees, sustainable management, Fagus orientalis, Iran
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