ever, 4 out of the 6 species indicated a considerable decrease in abundance. In fact, as there were repeated fires in the region that experienced 7 fire incidents and the lack of time for forest to reconstruct, there were observed minimum amounts of richness and diversity. The species did not have a chance for reconstructing and increasing their percentage cover. Massad et al. (2012) concluded that repeated fire incidents decreased the number and diversity of species and caused important changes in the structure and composition of plant communities. Cochrane and Schulze (1999) and Barlow and Peres (2008) achieved similar results in their studies. Malkisnon et al. (2011) observed that repeated fires dramatically changed the type of Mediterranean vegetation cover. Frequent firing may remove vegetation species that rely on seed production for their persistence (Benson 1985; Fox and Fox 1986). Changes in habitat structure as a consequence of frequent burning are likely to disadvantage many native species (Whelan 1995). Peterson et al. (2007) and Peterson and Reich (2008) observed in their studies that repeated fires reduced biological diversity and stated that further repetition of fires might have eradicated species. According to our study, fire can increase richness and diversity of species, however, such an increase is different with respect to repetition and number of fire incidents. Burton et al. (2011) found that species overall diversity, coverage and richness in oak forests could significantly increase from zero to five by repetition of fire incidence during a decade.

Eight species were observed in the area which experienced 3 fire incidents; such species did not exist in the rest of regions. On the other hand, 6 species in the area which experienced 3 fire incidents showed a significant increase in abundance as compared with the control area. In fact, fire helped the growth of these species, since through decreasing competition it created better space conditions and increased availability of resources. In other words, occurrence of these species and the significant increase of other six species after fire were due to a better use of available nutrients and necessary space for establishment.

There were 3 species in the control area which were not observed in the areas after fire. In fact, fire eradicated these species by destroying and/or activating their viability and not allowing them to have a chance to appear. In the area, which experienced 7 fire incidents, 17 other species did not have a chance to appear which was due to repeated fires and the lack of nutrient resources.

There was observed only one species – *Rubus fruticosus* (L.), which indicated a significant increase in the area which experienced 7 fire incidents. *Rubus fruticosus* (L.) is an invasive species. Due to its high compatibility it can be considered as a serious threat for biodiversity of the region. Adel et al. (2012a) and Banj Shafiei et al. (2006) observed a significant increase of this species after fire and proposed that it should be removed from the region through silviculture operation.

One of other reasons that led to reduction of diversity in the area which experienced 7 fire incidents was soil characteristics. There was observed significant reduction of humidity percentage with the increase of fire repetition. Soil moisture plays an important role in dispersion of plant species and it is considered as one of the basic factors in establishment and growth of plants (Shafroth et al. 2000). Graned et al. stated in 2011 that soil humidity decreased 44% after fire. On the other hand, microorganisms need a certain amount of humidity to decompose the litter and perform other processes. In the case when needed humidity is not provided, decomposition processes are disordered and nutrients needed by plants are not supplied. Bruhjell and Tegart (2001) observed in their studies that an increase of organic matter after fire depended on soil humidity. In case soil humidity is supplied, fire increases activity of soil microorganisms, which in turn increases soil organic matter. Brian et al. (2003) obtained similar results in their study. Nitrogen and carbon are the most important nutrient factors required by plants; they participate in most of chemical activities of plants and cause plants to grow. In the region under the study, these two elements showed significant increases in the area which experienced 3 fire incidents. Meanwhile, nitrogen and carbon contents in the area which experienced 7 fire incidents were lower than those in the area which experienced 3 fire incidents. This could be another reason for changing richness and diversity of plant species in the areas studied. Campo et al. (2006) concluded in their studies that repeated fires reduce nutrients elements of soil. In their studies in Hong Kong, Marafa et al. (1999) observed that repeated fires reduced N, NH_4, P, Ca, and Mg in soil. Bastias et al. (2006) in their studies in western Australia observed that fire reduced N and C elements. Aref (2011) and Neff (2005) observed reduction of soil nitrogen after fire. Verma and Jayakumar (2012) expressed that changing nutrients recycle would change ecosystems' products so that more access to nutrients leads to further growth of herbaceous species.

Based on the present research, it can be stated that fire increases diversity and richness of plant species; however, the rate of increase is different with respect to repetition of fire. Another factor that may increase diversity and richness is the effect that fire has on soil. Fire affects the understory cover of forests, diversity and richness. As forest under the study plays environmental and hydrological roles in addition to its economic role and understory species play a crucial role in forest structure, the protection of the forest observed and prevention of repeated fire incidents should be performed by firm and stable management. Such measures should be included at the top of the agenda of region's natural resources authorities.

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