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**Best Student Oral Presentation**  
**Abstract**

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**Effects of Repeated Fires on Native Plant Community Succession at Hawai'i Volcanoes National Park.** Few studies have examined influences of wildland fire in lowland wet forests and even fewer have examined repeated fires in these threatened tropical ecosystems. Previous research has shown that wildfires occurring at remarkably short intervals of two successive years reduced woody species densities and increased herbaceous species cover significantly. To examine the effects of multiple wildfires (2002-2003) on forest composition and structure, we established five replicate plots in two native communities at Hawai'i Volcanoes National Park. These were 'ōhi'a/hāpu'u (*Metrosideros polymorpha/Cibotium glaucum*) and 'ōhi'a/uluhe (*Dicranopteris linearis*) forests. Fires were stand replacing where over 95% of the dominant 'ōhi'a trees were top-killed. One year following a single fire event a mean of 56% of the 'ōhi'a trees survived through basal sprouting while 93% of the hāpu'u survived. A second fire occurring the next year dramatically lowered survival of 'ōhi'a (11%) and hāpu'u (56%). 'Ōhi'a seedling recruitment was also significantly lower following a second fire in the ohia/hāpu'u forest. In contrast to the response of woody vegetation, regeneration and establishment of herbaceous species was faster following a second fire in the 'ōhi'a/uluhe forest. In both communities, repeated fires resulted in lower 'ōhi'a survival, no significant increase in seedling establishment, and rapid occupation by aggressive herbaceous species, all of which may delay, or even prevent, recovery to native forest dominance.