

CLASSIC ARTICLE

INTRODUCTION TO LEONIDAS G. LIACOS' ARTICLE

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Leonidas Liacos is a pioneer of fire ecology and management for Greece. He studied forestry in Greece and in France where he did his Ph.D. on alpine grassland hydrology in the early 1950s. In 1958, he went to Berkeley, California, USA, for post-doctoral studies in range management under Professor Harold Biswell, who was promoting the use of fire and prescribed burning in forest management at that time. Liacos was inspired and fully accepted Dr. Biswell's ideas. When he returned to Greece in the early 1960s, he started advocating the use of fire in forest management in Greece, as well as established his first prescribed burning experiments. His article published here, which was originally presented in the 1974 fire ecology conference of the Tall Timbers Research Station in Tallahassee, Florida, USA, describes most of these experiments, the ideas behind them, and the first results produced.

Liacos' article is a classic for Greece because it provides the first historical evidence that fire was part of the natural environment since prehistoric times by citing Homer and other classic writers. This information had not been recognized in the early 1970s. The information that prescribed fire can reduce fire risk in forests and rangelands that had started to get devastated by wildfires during that decade was also new. Indeed, although wildfires in the previous decades were few and small in size, they started to increase both in numbers and especially in size in the 1970s due to socio-economic changes that favored increased human activity in the urban-wildland interface (Xanthopoulos 2000).

In the late 1960s, I was appointed as a forester in the North Greece Forest Research Centre, where Liacos was doing his experiments. As his research assistant, I vividly remember him, standing in front of his experimental plots, preaching the ecological role of fire to extension foresters and suggesting prescribed burning as a tool to properly manage the fire-prone coniferous forests consisting of warm-Mediterranean pines such as Aleppo (*Pinus halepensis* Mill.) and Brutia (*P. brutia* Ten.). He also preached to forestry authorities and university professors, who were preoccupied by the traditional fire suppression policies.

His experiments were also the first to get established not only in Greece but in the whole Mediterranean region. He was frequently receiving visitors from other Mediterranean countries, to whom he was presenting his ideas and showing his experiments. Fire suppression policy was the dominant philosophy in these countries, too. As a result, he met a lot of opposition. Having studied in France, he wrote a relevant article (Liacos 1986) and had several contacts with French foresters, with whom he carried out very long and hot discussions.

Liacos stresses in his paper the role of fire in decomposing organic matter, a function that is hampered under the Mediterranean climate due to the warm and dry conditions. His innovative idea

was that grazing has a similar function. For this reason, he tried to combine prescribed burning and livestock grazing in his experiments. The methodology he proposed was to apply prescribed burning to reduce the woody understory in the pine forests, then seed palatable forage species and, finally, introduce livestock, mainly goats, in order to control the shrub regrowth. This was a clever idea for Greece and other Mediterranean countries having conflicts between domestic animals and forests because he suggested that livestock be considered as a forest management tool (Liacos 1980). Given the prevailing conviction at that time that goats were the main factor for the destruction of the Mediterranean forests (e.g., Thirwood 1981), his ideas were revolutionary and helped in the reconsideration of the role of goats in these forests (Papanastasis 1986).

Liacos' paper stirred the stagnant waters of classical forestry inspired by the nineteenth century Central European ideas of no interference in the forests (no fire, no grazing) and contributed to the education of a new generation of foresters on the ecological role of fire and grazing in Mediterranean forest management. Unfortunately, however, it did not help institutionalize the use of prescribed fire by the Greek Forest Service, mainly for two reasons. One was his experimental results showed that the time period with ideal temperature and moisture conditions to apply prescribed fire in the winter period was relatively limited. The other, more important reason was the prohibition of using prescribed fire in forest management that required a change in the law on forest fires in the Greek parliament. That change was not possible given not only the opposition of the officials in the Forest Service but also of the general public who were already overwhelmed by the frequent summer wildfires and were not prepared to see smoke coming out from prescribed fires in the winter period, too. Even legalizing the use of prescribed fire in rangelands to mitigate the big problem of pastoral wildfires was not possible.

Unfortunately, prescribed fire today is still forbidden and is not even mentioned as a management tool. On the contrary, livestock grazing is widely perceived as a tool for reducing fire risk and enhancing tree growth in forest lands (e.g., Papanastasis 2009). I can only hope that the ecological wisdom expressed by Liacos will prevail in the future.

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