



# Research Links

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## FIRE IN PROTECTED AREAS

*Fire management challenges the very fundamentals of Parks' policy and purpose*

Stephen Woodley

Possibly nothing in the entire spectrum of managing protected areas causes so many difficulties as dealing with wildfire. It is a force of nature that can be absolutely terrifying, transforming forests to ashes, and green nature to black devastation. Wildfire can destroy property and even take lives. As small children, we are all taught to be careful with fire, to protect nature and ourselves by carefully extinguishing our campfires. As adults, when the fire weather index goes up in our parks, we leap into preparedness. Specially trained crews stand at the ready, aircraft are hired, campfires banned, and the public gravely warned of the danger. The beast of wildfire lurks nearby.

Yet, the science of ecology tells us a completely different story. Most of the ecosystems of Canada have evolved with, and been formed by, wildfire. Wildfire is as "natural" as wind or rain. Ecosystem science shows that many of the ecosystems we seek to protect within national parks are fire-adapted—they need wildfire. To eliminate fire from those systems is as direct an ecological insult as damming a river or shutting out rain. Yet that is exactly what we have done to the vast majority of protected areas over the past 50 years.

How can we possibly reconcile our management of protected areas with the reality of wildfire? How can park visitors, adjacent land owners, managers, and park staff be brought into the solution and convinced that wildfire is essential? What policy options is Parks Canada pursuing to ensure wildfire plays its essential role in maintaining ecological integrity? I will try to address these questions in this article.

### A BRIEF HISTORY OF WILDFIRE MANAGEMENT

The development history of the fire policy and current practices has been well reviewed (Woodley 1995; Lopoukhine 1993; Westhaver 1992; Day *et al.* 1988; Van Wagner and Methven 1980). While there have been some notable exceptions, the most



*A new way of thinking: fire as a natural and necessary process*

common reaction has been to suppress all wildfire. One of the main reasons for the development of the Warden Service in the Rocky Mountains was to control wildfire. The service was so successful in its job, the annual area burned during the last 60 years has been reduced to three percent of the previous, long-term average. The vast majority of fire researchers believe that the lengthening of the fire cycle is substantially due to fire prevention and suppression. The elimination of native burning is also a critical (but unresolved) issue (*see Kay, p. 20*).

After 1945, in response to a dramatic increase in the number of visitors to Canadian national parks, Parks Canada embarked on a "protection" stage of management. Parks were considered natural and wild, and the job of park management was seen as protecting parks from threats such as poaching, trampling, and fire. Fire suppression became much more effective, and it is likely that, during this period, fire control began to alter the historical fire regime.

In the '70s, there was a growing realisation that parks were not always self-regulating, natural ecosystems. Instead of "natural," park ecosystems were increasingly seen as "impaired" and management was deemed necessary to correct this condition. Fire was increasingly viewed as an important dynamic element in ecosystems, and research clearly demonstrated that some ecosystems were fire-dependent. Parks Canada responded to these changing attitudes with a 1979 policy permitting, under certain conditions, active management or manipulation of the ecosystem. This was the beginning of Parks Canada's "fire management" era. With a new directive produced in 1986 and a comprehensive fire policy review, Parks Canada embarked on a new relationship with fire. Fire was officially recognized as an important element in the ecosystem and it was to be restored to its "natural role" by active management. Unregulated wildfire was considered impossible in most parks because of the values—public safety, protection of property, protection of rare species or habitat—at

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