

Yellowstone's Wildlife in Transition

Edited by P.J. White, Robert A. Garrott, and Glenn E. Plumb

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Yellowstone National Park occupies a special place in the American imagination. Home to mountains, geothermal features, and an impressive variety of plant and animal life, the park attracts up to 3 million visitors every year. The park that visitors will find in 2014, however, is a very different place than the one first created in 1872. These changes, both human influenced and natural, are a part of a constant changing within the Yellowstone ecosystem stretching back through geological time. Indeed, as the world's first national park, past decisions on managing Yellowstone amount to a living history of human ecological understanding and park management practices.

Yellowstone's Wildlife in Transition, edited by P.J. White, Robert Garrott, and Glenn Plumb, expertly addresses Yellowstone's history and ecology. Featuring 34 contributing authors, mostly ecology and biology experts from academia or the National Parks Service, *Yellowstone's Wildlife in Transition* is able to evoke the intricacies of ecological relationships in a way that is understandable for beginners to the topic without sacrificing the complexities. The chapter segments are logical and divided into four sections: background and concepts, population dynamics and interactions among species, communities and landscape-scale processes, and invasive, non-native species. This allows the chapters to progress in such a way as to build up a novice reader's understanding of key ecological concepts like population dynamics, predation and ecological process management.

The authors clearly define ecological terms and repeat several key ideas in order to emphasize their importance. One such idea is the dynamic nature of ecological relationships. Many people wrongly believe that nature exists in a static state of balance, where the only real changes occur through human action. In fact, natural process are in constant flux, whether as a result of landscape-scale disturbances like fires or floods, or on a smaller scale of one species out competing another. That is not, however, to say that human activity does not impact natural systems; it does, both directly and indirectly.

Human impacts on Yellowstone are evident in the management practices throughout the park's history. Many management techniques from bygone eras would be unthinkable today. Hunting, the introduction of invasive species, and widespread fire suppression were all part of regular management practice in Yellowstone, but are no longer. Current practices often take the form of undoing past practices by controlling

and removing invasive species like lake trout or by reintroducing extirpated native species like wolves. The loss and subsequent restoration of wolves in particular, has had a wide ranging, and often times surprising, impact on the surrounding ecosystem.

Yellowstone's Wildlife in Transition concludes with a chapter on the future of the park, which is uncertain. Further human impacts include climate change, habitat fragmentation along park borders, and pollution. It is unclear how the park's ecosystem will respond to these impacts although, as the authors make clear, Yellowstone has a long history of adaptation and transition.

Yellowstone's Wildlife in Transition makes for an engaging text on both Yellowstone's specific ecosystem and general ecological concepts. The book's chapter structure and definitions for technical terms result in a science resource accessible to generalists. Recommended for public, academic, and research libraries, as well as anyone interested in Yellowstone or ecology.

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