

The Carnivore Way: Coexisting with and Conserving North America's Predators

By Cristina Eisenberg. 2014. Island Press, 2000 M Street NW, Suite 650, Washington, DC, USA, 20036. 29.00 USD for e book format, 328 pages, 30.00 USD, Cloth.

What would it be like to live in a world with no predators roaming our landscapes? Would their elimination, which humans have sought with ever greater urgency in recent times, bring about a pastoral, peaceful human civilization? Or in fact is their existence critical to our own, and do we need to be doing more to assure their health and the vitality of the landscapes they need to thrive? These are questions that Cristina Eisenberg takes on in her compelling new book *The Carnivore Way*.

This jacket cover of the hardcover provides an excellent summary of the text: "Cristina Eisenberg argues compellingly for the necessity of top predators in large, undisturbed landscapes, and how a continental-long corridor — a "carnivore way" — provides the room they need to roam and connected landscapes that allow them to disperse. Eisenberg follows the footsteps of six large carnivores — wolves, grizzly bears, lynx, jaguars, wolverines, and cougars — on a 7,500-mile wildlife corridor from Alaska to Mexico along the Rocky Mountains. Backed by robust science, she shows how their well-being is a critical factor in sustaining healthy landscapes and how it is possible for humans and large carnivores to coexist peacefully and even to thrive. Students, resource managers, conservation organizations, and anyone curious about carnivore ecology and management in a changing world will find a thoughtful guide to large carnivore conservation that dispels long-held myths about their ecology and contributions to healthy, resilient landscapes."

Being a carnivore biologist myself, I found that the manuscript will be a valuable literature source when needing to quote a reference on the ecological importance of predators, maintaining intact ecosystems, and/or for having corridors connecting populations of carnivores, or any species for that matter. Eisenberg writes for both the layman as well as the scientist in an understandable and clear fashion. She weaves personal anecdotes along with scientific references to make each section informative and inspirational. Focussing on western North America, the reader is taken from Alaska and the Arctic down to Mexico and the desert. Her personal experiences alone — like seeing a grizzly bear from 12 feet away near her northwest Montana writing cabin (p. 84), watching a pair of wolves chasing a white-tailed deer across her property (p. 113), observing abundant lynx and snowshoe hare sign while back country skiing (p. 173-174), or getting stalked by a cougar (p. 192) — make her the perfect candidate to write this volume. In fact, these wildlife sightings almost seem too perfect given the contents of this manuscript, and that is what makes it a gem! Even the chapter on jaguars (p. 217) connects to her personal past since she was born in northern Mexico (p. 78), the very area where source

populations are producing transient jaguars that have colonized the southwestern United States in recent decades.

The book is laid out in two main sections: *Wildways* and *Where the Carnivores Roam*. Part 1 (*Wildways*) focuses on corridor ecology and the ecological role of large predators and gives the reader a solid understanding on the science behind protecting large areas, connecting them, and the important role that carnivores play in intact ecosystems. That section concludes (chapter 3) with the legal framework, i.e., international environmental laws that apply to large carnivores in North America. This chapter is important in knowing what laws could be strengthened (or maybe even created) to better protect wild carnivores, especially considering that they often make enormous movements, crossing political boundaries and a variety of jurisdictions and land ownership regimes in the process. In Part 2 (*Where the Carnivores Roam*), Eisenberg examines each of the six large predator species separately and in-depth providing excellent natural history accounts and references on each animal. These chapters (4–9) are important because they describe how individuals use the countryside, which gives the reader a solid understanding of how these creatures survive in both protected places (e.g., wilderness areas, national parks) as well as progressively urbanized locales. The focus on individuals is becoming increasingly recognized in wildlife conservation, rather than just populations, so I appreciated these highly personal accounts including of the Lamar Canyon wolf pack of Yellowstone National Park (p. 139–141) whom I have spent many hours observing and share pictures of in my book *My Yellowstone Experience*.

Many topics are woven throughout these two parts and nine chapters, including carnivore dispersal and movement distances, human hunting and trapping, human use of the area (e.g., ranching, recreation), boundary issues with other jurisdictions including the US-Mexico border fence, ecological importance of predators, and how laws protect (or don't) carnivores in this vast area. In the last chapter (10), *Earth Household*, Eisenberg nicely summarizes the book. Given that the information provided has a wide reach, and covers many themes, that was not an easy task. In Part 1, she discussed an ecological effective carnivore population as one that is capable of stimulating top-down trophic cascades and, using tenets of the precautionary approach, creating more-resilient ecosystems means conserving large predators. Those chapters lay a framework suggesting that carnivores create healthier environments through both direct acts of predation as well as indirect effects ("the ecology of fear") even if recent scientific papers debate as to the

actual effects that they have (e.g., see Biological Conservation, 2012, 150: 143–149). The final chapter does a great job of summarizing and revisiting those concepts as well as taking in knowledge of what the reader learned about the six large carnivore species from Part 2. Eisenberg argues that landscapes that contain large predators will be more resistant to climate change because they create biodiverse, healthy ecosystems (p. 241). The author also stressed that coexistence is a vibrant thread that runs through all the lessons about connectivity, food web relationships, and environmental law (p. 243). She notes that we need to utilize collaboration and ethics to fully realize coexistence with large carnivores (p. 244). There she revisits Aldo Leopold and his seminal land-ethic statements and also discusses how science has caught up to Leopold's 60+ year old quotes to show just how important keeping all of Mother Nature's parts are, particularly predators. The question now is if setting proper policy by politicians and wildlife managers will also catch up to properly conserve these charismatic mammals. In that regard, Eisenberg eloquently describes the need to revisit and rethink the North American Model of Wildlife Conservation where hunting dominates wildlife conservation. She (p. 248) notes that "the model focuses solely on conserving wildlife for hunting purposes. Yet in the United States, only 6 percent of citizens hunt. I'm part of that 6 percent. But in a democracy, basing wildlife management on a hunting paradigm that doesn't address the needs or desires of the non-hunting public (the vast majority of Americans) is wrong if, as the North American Model states, all wildlife is owned by all citizens jointly."

In light of what we know about trophic cascades, recovering the wolf, removing Endangered Species Act protections, and then hunting them down to a bare legal minimum is not only wrong scientifically, but also ethically (p. 248). Eisenberg advocates for a contemporary land ethic that wouldn't preclude human hunting but redefines hunting as a practice in which we don't treat animals like a crop to be harvested and one in which we exercise more restraint and respect for the living beings that we hunt (p. 249). Like many ecologists, she believes that hunting carnivores should be greatly curtailed or even eliminated as her last personal experience in the book attests to when she visits the Great Bear Rainforest in coastal British Columbia and has memorable up-close sightings of grizzly and black bears, populations that have never seen the barrel of a gun. Eisenberg concludes (p. 256) with the thought that we ought to base our relationships with predators on respect, rather than fear, and that it is important to remember that coexistence means different things to different people (from managing carnivores at biological and legal minimum levels to not disturbing them at all). She concludes (p. 256) that "we're all threads in the same cloth of creation, and we dwell in this Earth household together." Clearly the author (like myself)

views coexistence on the latter side of the spectrum, i.e., of conserving and restoring populations of carnivores to their natural population densities in as many places as is feasible.

I have but two minor issues with the book. One, the use of scientific names is used throughout each chapter. For the life of me, I don't understand why there is no table at the beginning or end of the document that states these names once and then is not used again so there aren't so many uses of "gray wolf (*Canis lupus*)" for instance. The other problem is similarly trivial and that has to do with the endnotes. There is an impressive 29 pages of notes at the end of the book. However, there are a few places where the endnote doesn't fit the reference, especially in chapter 1 where reference 18 should be for 19 (p. 22) and every reference thereafter is one lower than it is supposed to be finishing with reference 39 which should be #40 (p. 35). But this is nitpicking and it takes a detailed read to even notice these errors.

With that being said, I highly recommend *The Carnivore Way* as it is a great book for the novice and seasoned conservationist alike and should be widely read, particularly by politicians in charge of creating laws to protect wildlife. It is easy to read and engaging, and is a great reference on the importance of maintaining ecologically effective populations of predators. There is even a nice glossary that summarizes the technical terms used throughout the text. Western North America, with its vast public lands, is ripe for carnivore re-wilding and managers, students, and the general public can get an appreciation of this process and of the animals themselves by reading this tome and its associated ~40 black and white pictures and illustrations, including my favourite of 4 cougars using an underpass to travel beneath a 4-lane highway in Canada (p. 31). But these mammals needn't be restricted to just the Rockies (i.e., "the carnivore way") and historically they were not. In time, I hope that a second volume of *The Carnivore Way* will be written by Eisenberg that describes how these sentient beings got better protection (e.g., thru a National Carnivore Conservation Act [see <http://www.easterncoyoterresearch.com/worlds-first-carnivore-conservation-act/>] – yes, I may dream!) to allow them to re-colonize that large area. I also dream that a future Volume 2 will discuss actions taken toward carnivore conservation and recovery in eastern North America where many of those same species (wolves and cougars most notably) formerly were widespread. If we have recovered white-tailed deer, moose, wild turkeys, beavers, fishers, and even elk to many areas of the East, why can't we also recover the large predators that create such awe, allure, and respect from so many of us? After all, they are as American as any human being is!

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