

## BOOK REVIEW

# The Cougar Conundrum: Sharing the World with a Successful Predator

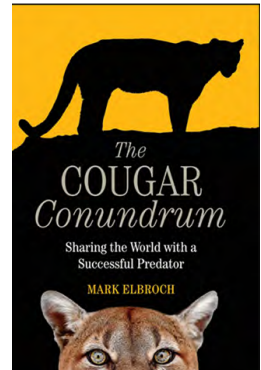
Mark Elbroch. 2020. Island Press, Washington, DC, USA. 250 pages (soft cover). \$30.00. ISBN:9781-61091-998-2

**cougar:** a large, powerful tawny brown cat (*Felis concolor*) (Gove 1971)

**conundrum:** (1) a question or problem having only a conjectural answer; (2) an intricate and difficult problem (Gove 1971)

Dr. Mark Elbroch is well-known as the author of several natural history books, the majority of which are useful field guides. He also is an accomplished scientist, and has become a prolific contributor to the scientific literature on mountain lions, a species to which he refers as cougar—or mountain lion—throughout this book. I very much appreciate that because those names are in common use throughout the United States and Canada, and I find the increasingly frequent use of puma to be couched more in ‘political correctness’ or novelty than are cougar or mountain lion.

With publication of *The Cougar Conundrum*, Mark Elbroch has written about an intriguing topic that will be of some interest. The author clearly holds cougars in high regard and is knowledgeable about their ecology. He has been on the cutting edge of the application of new technologies that have provided insights into the ‘private lives’ of these cryptic felids, but he also has emphasized the value of traditional field work (Elbroch et al. 2018), an important point evidenced further by his statement (p. 21) that, “Most North American researchers spend their entire careers trying to learn something about mountain lions from the blips and bleeps of handheld receivers [or locations displayed on a computer screen], rather than from any opportunity to actually observe the animals...”. It also is clear that he considers mountain lions to be incredibly special animals, and a theme I detected throughout the book is that they warrant incredibly special consideration. For example, in the preface Elbroch describes the potential demise of a small population of mountain lions occupying the Santa Monica Mountains, an insular bit of habitat about 710 km<sup>2</sup> (275 mi<sup>2</sup>) in area, and writes (p. xvii) that, “[R]esearchers and wildlife advocates work to save a mountain lion population that, just 60 years previously, was *likely extirpated* [emphasis added] following state-paid bounties for dead mountain lions [in California].” No evidence is provided to substantiate that statement and, given the low effective sizes of mountain lion populations proximate to the Santa Monica Mountains (Gustafson et al. 2019), it is unclear from whence the founders of the current ‘population’ would have originated. Although not stated explicitly, Elbroch



appears to believe that the policies, regulations, and legislation currently in play in California represent an ideal model for mountain lion management and conservation throughout North America. I would argue strongly that such is not the case.

*The Cougar Conundrum* consists of 10 chapters, each dedicated to a separate, albeit general, theme. In Chapter 1, the author summarizes, and then debunks, a number of misconceptions about mountain lions, and Chapter 2 is dedicated to staying safe in mountain lion habitat. In Chapter 2, Elbroch parrots many recommendations previously put forth by others, but also emphasizes that mountain lions are timid, and more likely to flee than to attack. He notes (p. 32), “It’s a dangerous world out there, but mountain lions pose little risk when compared to all the other dangers.” In Chapter 3 (Of Lions, Pets, and Livestock) the author posits that, “Mountain lions are intelligent carnivores, quick to seize opportunities for an easy meal” (p. 58), a statement in which I found a bit of irony given the aforementioned reference to little risk, and the emphasis on behavioral differences among individual cougars that occurs throughout the book. The remainder of the chapter goes on to present examples of, examine problems associated with, and suggest potential solutions to predation on livestock and pets.

While reading Chapter 4 (Sharing Prey with Mountain Lions), I became much more interested in the book. Therein, he explores cougar predation, prey availability, hunter harvest, and competition for native ungulates between mountain lions and humans. Elbroch emphasizes (p. 90) that the restoration of desert bighorn sheep to historical ranges in New Mexico occurred because the chief advocate for doing so was, “[s]tubbornly set on increasing bighorn sheep numbers *to where they could be harvested by sportsmen again* [emphasis added] ...”, rather than acknowledging that desert bighorn sheep were at risk of extinction in New Mexico, and that recovery and de-listing was consistent with the State’s public trust stewardship of its wildlife resources (Rominger et al. 2006). Further, Elbroch makes no mention of the non-native ungulates, whether livestock, feral equids, or large exotic artiodactyls that likely have played a role in subsidizing resources for mountain lions, and thereby yielding a greater density or wider distribution of cougars than otherwise would have been the case. Shortly thereafter (p. 92), he notes that where deer formerly were absent, but now are sympatric with bighorn sheep, presence of those cervids has contributed to increased predation on bighorn sheep. Mention of feral or exotic ungulates, or free-range domestic livestock, in a similar context would have been appropriate, meaningful, and helpful.

In Chapter 5 (The Great Hunting Debate), Elbroch delves into the topic of cougar hunting, beginning the chapter (p. 99) by describing a recent review that emphasized “rampant trophy hunting” as—by far—the greatest threat to mountain lions in the United States and Canada (HSUS 2017). He then describes a subsequent critique (Cain and Mitchell 2018) prepared by researchers with the USGS Cooperative Research Unit Program (CRUP). An important role of the CRUP is to provide support in the form of objective and independent scientific reviews of ‘gray’ literature—of which the HSUS report is a classic example—but that role is not mentioned. Instead, Elbroch describes the critique as the result of concerns, voiced by “state wildlife agency personnel,” that the HSUS document could undermine current mountain lion management. That statement denigrates the reputations of state and federal agency biologists, and does nothing to enhance conservation of mountain lions. Much of the remainder of the chapter addresses the status of cougars in the context of harvest and its potential impacts to lion populations, but offers neither a defense of the HSUS document nor a rebuttal of Cain and Mitchell (2018).

In Chapter 6 (Lions on the Eastern Seaboard), the author examines evidence in support of and contrary to the persistence of the 'eastern cougar.' Declaration of that extinction in 2018, when combined with the synonymy of virtually all cougars in North America, could simplify a future introduction effort. Chapter 7 (How to Love a Keystone Predator) revived my interest, and it will evoke negative responses from some readers, and accolades from others. As an example, his statement (p. 152) that, "[D]ominionistic hunters driven by money and power wielded by the likes of Safari International [sic] are increasingly damaging hunters' reputations and our natural resources as a whole" followed by, "Dominionistic hunters are unlikely to be interested in the conservation of mountain lions or any wildlife..." Perhaps inclusion of such statements are an effort to stir debate, but I do not see them being helpful in 'big-picture' wildlife conservation.

Throughout the text the author criticizes state wildlife conservation agencies and, in my opinion, greatly disserves those that have dedicated their lives to the conservation of wildlife, whether hunted or not. On page 168, he states emphatically that those agencies "[f]ocused on wildlife management and emphasized the sustainable, wise use of natural resources, whereas the other [i.e., universities and external organizations] focused on understanding, preserving, and restoring biodiversity as a means of ensuring ecosystem health and resilience." That is an overstatement and entirely inappropriate, and further demeans the historical efforts of many, as will be emphasized in the penultimate paragraph of this review.

In Chapter 8, "The Money Behind Mountain Lion Management," Elbroch again expresses a lack of confidence in, and further disdain for, the state agencies charged with wildlife conservation and the dedicated biologists tasked with that public trust responsibility, whom he identifies repeatedly as beholden to special interest groups. No topics seem immune from criticism; among these are several national or international organizations including—by inference (p. 194)—The Wildlife Society (a professional society "[t]hat represents management-minded biologists and their interests..."). Also criticized is landmark legislation that has been very meaningful for conservation, as well as the North American Model of Wildlife Conservation and its primary authors. Elbroch is adamant (p. 194) that the North American Model "[is] our past, but it should not be our future," and emphasizes (p. 195) that, "There are many *wonderful, progressive-minded people working for state agencies* [emphasis added], and we must be careful not to confuse people with the institutions for which they work, or with the political governing bodies that sometimes dictate their priorities and approve their funding." That statement caused me to question what 'progressive-minded people' represent, and just what their presence portends for those agencies.

In the final chapter, "Toward Coexistence with Mountain Lions," Dr. Elbroch lays out his vision for the future of cougars and argues (p. 218), "They are evidence of true wildness, graceful, majestic, and strong." I emphasize, however, that those cryptic felids also are highly adaptable, and are capable of existing as viable populations under a multitude of disparate conditions and stressors where habitat is adequate to maintain a prey base and large enough in size to support more than a few cougars at any given time. Mountain lion populations occurring under such conditions do not require anthropogenic intervention to ensure persistence. Nevertheless, cougars have elevated emotions among the general public to the point of driving conservation and management. Many individuals insist the presence of those large carnivores is essential in isolated areas that are tiny in size and surrounded by urbanization and associated infrastructure, or where they present a risk to human safety. I suggest it is neither desirable nor essential for mountain lions to occupy every square ki-

lometer of 'suitable habitat' within their historical range, especially given the ongoing and highly successful efforts to ensure their persistence across the landscape, and a constantly expanding geographic distribution. Unfortunately for mountain lions—and for the large native herbivores on which they depend—it is not until late in the book (p. 202), that destruction of habitat in the United States and Canada is emphasized adequately in terms of its impacts. I suspect mountain lions would have been better served had the importance of habitat been emphasized from the very beginning and had been a recurring theme throughout the book.

It is not my purpose to demean an attempt to call attention to some serious issues with which society and wildlife are faced, particularly with respect to a controversial topic. In my opinion, however, that effort could have been accomplished more effectively had the author relied on fewer personal opinions and more heavily on the peer-reviewed literature, and had incorporated a greatly expanded list of references. Additionally, I found organization of the book to be confusing and a bit burdensome. It is my impression that the author intended a 'point-counterpoint' approach, but that was not entirely clear. Further, literature used to substantiate statements varied in terms of its source or level of 'quality control', with some originating as online, unrefereed opinions or popular articles, some from highly regarded academic journals, and additional sources that the author refers to as counterfeits and describes (p. 166) as "[p]redatory journals that will publish anything anyone has written and claims to be science." It would have been immensely helpful had citations been included at the end of each chapter, rather than grouped by chapter at the end of the book, because efforts to consult in-text citations were extremely time-consuming.

I was at a disadvantage when preparing this review because I received what was described as "advance reader's edition" and was cautioned against quoting material until it was checked against the final, printed edition. I noted several minor errors in the advance edition that were corrected in the published version; other errors remained, however, and at least one mistake not in the advance edition appeared in the final publication. Among the most egregious errors remaining in the final version centered on the Federal Aid in Wildlife Restoration Act (i.e., the Pittman-Robertson Act), which is referred to at least 6 times as the "Pittman-Roberts Act."

Dr. Elbroch has been described (p. 239) as a "soulless bastard" for enslaving mountain lions for research purposes, and as a "Σ#!†-for-brains" liberal for his views on mountain lion hunting; despite publication of *The Cougar Conundrum*, I suspect those descriptors will remain. Combinations of facts, opinion, emotion, speculation, and criticism—some of which will foment strong reactions—occur throughout the book. Yes, there is a 'cougar conundrum' and it warrants discussion; I found the book itself, however, to be a conundrum that is unlikely to decrease the divisiveness that pervades issues related to the conservation of mountain lions.

Bruce Wilcox and, the late, Michael Soulé are revered as founding fathers of the discipline commonly referred to as Conservation Biology. Some 40 years ago, when penning their ground-breaking work bearing that title, Soulé and Wilcox (1980) emphasized that, "[T]he emergence of conservation biology as a respectable academic discipline has been slowed by prejudice. Until recently, few academically oriented biologists would touch the subject. While wildlife management, forestry, and resource biologists [s]truggled to buffer the most grievous or economically harmful of human impacts (deforestation, soil erosion, overhunting), the large majority of their academic colleagues thought the subject was below their dignity. But academic snobbery is no longer a viable strategy, if it ever was. [T]he

luxury of prejudice against applied science is unaffordable.” Although not acknowledged in *The Cougar Conundrum*, the discipline of Wildlife Management was ahead of the times.

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