



BOOK REVIEW

# Without Snakes We Lose Our Humanity

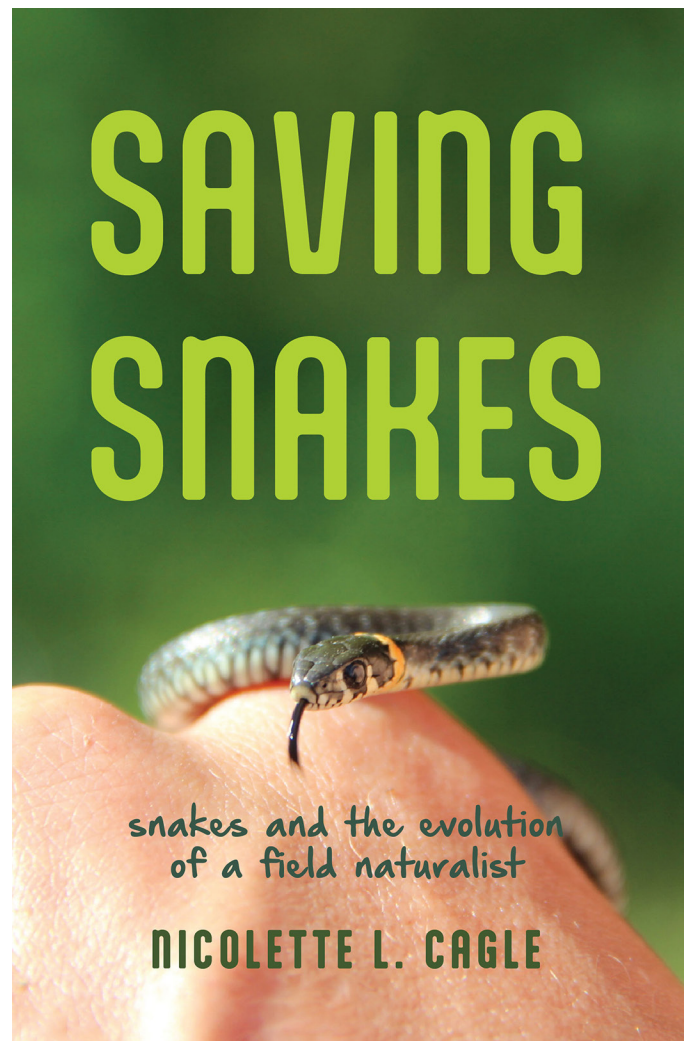
*Saving Snakes. Snakes and the Evolution of a Field Naturalist.* 2023. Nicolette L. Cagle. University of Virginia Press, Charlottesville and London. xii + 210 pp. Paperback – ISBN 9780813948829. \$27.95. Ebook – ISBN 9780813948836. \$27.95.

What’s not to like about a book that seeks to save snakes and provides insights into the evolution of a field naturalist, both topics dear to our hearts. This book by Nicolette L. Cagle is dedicated to her son and “future generations of students and snakes” — and we have to admit to being caught up immediately by that juxtaposition with students, with whom we’ve spent many days in the field, along with some of our favorite animals.

The book begins with the first of 17 intriguingly titled chapters, this one called “An Acre of Snakes,” in which the author describes walking through an old field in northern Illinois as a seven-year-old with her father and discovering a gartersnake. Our reactions differed — an obvious reflection of our own experiences. Not having encountered snakes until RP stumbled into a herpetology class as an undergraduate, he was immediately envious of her childhood experience and of the wonder the discovery elicited, something he has seen repeatedly in young people to whom he’s had the pleasure of introducing snakes. In sharp contrast, BCH was instantly transported to her own youthful experiences, and Cagle’s story elicited memories of once again being a seven-year-old flipping cover objects hidden in impenetrable cattails and waving milkweed. It immediately occurred to her that many snake enthusiasts likely began their life-long journeys engaged in a similar search for gartersnakes, awakening shared (and hopefully fond) musked memories.

The next chapter, “Lessons from Wisconsin,” tells of an intrepid rescue that kept a little girl from being bitten by a Northern Watersnake (or was it the rescue of the snake from the little girl?). The lessons learned were to “always learn the local snakes before traveling somewhere new” and “if people say things with confidence, other people will believe them, even if the words are coming out of the mouth of a fourteen-year-old.” However, we agree that Cagle’s use of the term “venomous” to describe some colubrids could elicit unneeded alarm in readers with few or no firsthand experiences with snakes. Perhaps encouraging caution when handling any wild animal would have been a preferable approach — and one the author effectively employed in later chapters.

The chapter titled “Idols” is not about snakes as idols, as we had expected, but instead introduces the people who greatly influenced the author. These include Donald Culross Peattie, the naturalist, not Peattie the philosopher or Peattie the mixologist, despite his dislike of snakes, which Cagle largely forgave in light of his delight in nature. Next comes another naturalist, E.O. Wilson, in no small part because his “illustrious career as a Harvard entomologist and sociobiologist was launched by a precocious boyhood interest in snakes” and because “he continued to write about snakes in his books” and “reflected on the fear and fascination snakes inspire among people around the world.” Thomas Jefferson was included, despite “warts and wrinkles and worse,”



because he was a “nature lover” and thought like a scientist, even as president. “And while Jefferson himself didn’t contribute to the wealth of scientific knowledge about snakes, he launched an enterprise that did: the Lewis and Clark expedition.” Robert Kennicott, one of whose nicknames was “Bob the Serpent Tamer,” and who probably is best known for his exploration of Alaska, advocated for the rattlesnake rather than the Bald Eagle serving as the national symbol of the United States and one day arrived at his family’s dining room, declared he was famished, and set a live Massasauga on the table. Cagle ends the chapter with a glimmer of hope, noting that “those who have been trained from birth to believe that ‘the only good snake is a dead snake’ have experienced guilt and remorse” and citing D. H. Lawrence (not one of her idols), who, subsequent to a half-hearted effort to kill a snake, immediately regretted it and despised himself and the voices of his “accursed human education.”

Unfortunately, this chapter also includes information that is at best incomplete. Cagle mentions that the Eastern Massasauga is listed only as a candidate under the United States Endangered Species Act. In fact, the species has been listed as threatened since 2016. Also, she notes that “only six to eight relict populations of Eastern Massasugas remain, stretching from Iowa to central New York.” We are unsure how she defined “population,” but at least six separate locations support Eastern Massasugas in Wisconsin alone.

“Love and Loathing” begins with a description of the author’s volunteer work at a nature preserve north of Chicago, when, as a fifteen-year-old, she described watersnakes as: “Graceful and elegant with every contraction of their powerful muscles. They glide through the water with a superior air, they don’t make a sound, but their presence is felt.” Noting that she “wasn’t the only one inspired by the graceful lines of snakes,” she goes on to briefly acknowledge the power of snakes in art before changing directions and contemplating fear. Stating that “women have been documented as being four times more likely to have fears of snakes and spiders, but not of other things that commonly scare people, like heights or injections,” Cagle describes one of the consequences of that fear: “Fear of snakes among teachers-in-training negatively influences their conservation attitudes and decreases the likelihood that they will incorporate snakes into their future curricula. This is a shame because research also indicates that when people interact with snakes, they are less likely to think of snakes as threats and more likely to have positive attitudes toward them.”

“La Suerte” combines “delighting in the simple pleasure of watching life thrive” in Costa Rica with the recognition that “People, with the Bible’s explicit blessing, have been punishing snakes ever since” Eve was deceived by a cunning serpent. “Ometepe Dreams” describes the human and natural history of Ometepe (two narrowly joined islands in Lake

Nicaragua), notes the changing nature of herpetology (since the early 2000s, women authored only 10–15% of scientific papers on snakes; “today, that figure is closer to 36 percent”), and describes a first-hand example of what Cagle calls the “Steve Irwin Effect,” when the “TV-show herpetologist” followed a brief informative session about the natural history of Northern Boa Constrictors by manhandling a snake to elicit a “sense of spectacle.” Disgusted by the mistreatment of a “proud creature with no voice,” Cagle bemoans the frequent instances of “herpers showing off their supposed fearlessness and bravery by catching snakes that didn’t need to be caught and harassing snakes that didn’t need to be harassed.”

“Dissertation” is an account of the author’s research, which “hinged on two passions: snakes and the long-lost tall-grass prairie.” “Vulnerability” bemoans the decline in many snake populations, noting that they are “exquisitely vulnerable.” Cagle lays out here — and throughout the book — a plethora of threats that include habitat destruction and fragmentation, with agriculture and urbanization prime culprits; roadkills (noting that she brakes for snakes); illegal harvesting and overharvesting; invasive species, such as the Cane Toad in Australia; seemingly innocuous objects like erosion-control fabrics in which snakes become entangled and die; OO (*Ophidiomyces ophidiicola*), which causes SFD (snake fungal disease); rattlesnake roundups that go “beyond simple mortality” by perpetuating “negative stereotypes about snakes and normalize their killing”; and simple persecution for, to borrow a phrase from a friend and colleague, “nothing more than being snakes.”

“The Outback” begins with an encounter describing meditation as “a kind of everyday magic” that, later in life, “lost some of its power to revive, renew, and reconnect” but which was replaced by a new type of magic — travel. Using as an example a trip to Australia with husband and parents, Cagle notes that an encounter with an Amethystine Python “offered something [she] hadn’t felt in a long time. Peace.”

Another travelogue with a lesson, “Peru” describes a young man, now the author’s husband, who is bitten by a South American Coralsnake. Instead of the traumatic experience turning him off, he met the author four years later during a tropical herpetology course and, twenty years later, was keen to go back to Peru. Using Karl Schmidt’s untimely death from a Boomsnake bite as an example, Cagle does state emphatically that “snakes can kill us in horrible, disparate ways” but also that “snake venoms aren’t all bad,” describing how they have been used in many medicines. Nevertheless, “some snakes are deadly, and movies and literature know it well,” often exaggerating and distorting the real behavior of snakes.

“Gumby” begins with the authors’ training as a naturalist at a summer camp, where she met gumby. He seemed “like a cross between curmudgeonly, sarcastic ecoterrorist

Edward Abbey and wandering, roaming Jack Kerouac.” In any case, gummy, who never capitalized his name, helped the author recover from doubts that she, now in a professorial position, “could really change things from within the system.”

In “The Next Generation,” Cagle states that a “connection to snakes requires a cultural shift.” Describing a master’s project “premised on the fact that snakes provide valuable ecosystem services and for this reason they should be protected, but that protection was less likely to happen if future policy-makers ... couldn’t see the objective value or benefit of snakes.” Career interests were strong predictors of attitudes toward snakes and a clear correlation existed between chosen career tracks and the frequency of outdoor recreation. Also important are parents or teachers with strong environmental identities that can and do influence children and help them to develop a capacity for empathy, for which people need attachment, in this case with nature. Although Cagle did not cite the work of Louise Chawla of Colorado State University, her brief review of cultures that revere snakes and recounting her own positive encounters echo Chawla’s research on what engenders a conservation ethic — access to green spaces, positive experiences, and a mentor. Even if this might seem intuitive, the author’s accounts of her formative experiences and her early mentors clearly show how important these are if one is to become an advocate for the underdogs that are snakes.

“Words and Wisdom” recounts an outing with an experienced herpetologist who caught a snake and endeavored to educate students with many words, an approach the author described as “behavior that showcased deep knowledge but shallow respect” by objectifying the snake — “not the way to teach conservation.” In “The Mirror,” Cagle cites Aldo Leopold, who she characterizes as being much more radical than generally acknowledged, to grieve for the loss of snakes for “without snakes — as friends or foes — we lose our humanity.”

“Disaffected” begins with a visit to Mount Vernon, where the author impulsively buys a pair of socks emblazoned with a rattlesnake and the “don’t tread on me” symbol of the American revolution, only to learn that the Gadsden flag no longer represents the original anti-British and pro-American revolution, but instead has been coopted by white supremacists. She also notes that the Timber Rattlesnake, showcased on the Gadsden flag, is now extirpated from Rhode Island and Maine and is endangered in New Hampshire, Massachusetts, Connecticut, New York, New Jersey, Virginia, Vermont, Ohio, Indiana, Illinois, Minnesota, Texas, and Canada.

“A *Jubo* in Cuba” tells a tale of Dany, who was frightened by a Cuban Racer as a child, and notes that racer bites, which typically are at most mildly venomous, can cause severe reactions in some individuals. However, when the author and her husband encountered a racer during a trip to Cuba, he said: “You know, the old me would have immediately picked

that up,” leading to the conclusion that “wildlife observation that was truly observational might have some value to others” and that “maybe the world could become kinder by showing respect even to the *Jubo Común*, who on some days might flatten its neck and give chase and on others might slither away happily in the sun.”

The final chapter, “Hope for the Future,” revolves around a visit with graduate students to see Whit Gibbons, the icon of southeastern herpetology. After sharing his own experiences, “Whit showed respect to this intergenerational group in a way that was perhaps more profound: he asked questions.” Cagle likened this to Michael Meade’s difference between an “older” and an “elder,” elders having lived long but not gained wisdom, whereas elders have “grown deeper” and become wiser,” concluding that scientists, with their deep knowledge, “must fill the role of elders” and lift up the next generation as they learn about the world and grapple with the difficulties it presents.”

The book concludes with acknowledgements, references arranged by chapter, and an index. The production quality is first-rate and, although we appreciated the line drawings at the beginning of each chapter, we wanted pictures, both of the people who served as mentors in the author’s evolution of a field naturalist and of the snakes that played such important roles.

Interspersed throughout the book among the anecdotes and longer stories is an abundance of scientific knowledge about snakes, including efforts to control Brown Treesnakes in Guam and the nature of taxonomy. We found this interplay of personal narrative with accessible insights into research to be one of the most admirable aspects of the book. Only a few authors, all of them well known and widely admired for their ability to provide accessible insights into difficult topics, have successfully and consistently combined story-telling with hard science. Many are cited in this book. Nicolette Cagle deserves to be included in that distinguished pantheon. We hope she keeps writing.

To conclude this review, we selected a quote from the chapter on vulnerability: “Research suggests that when we devote our energy to small, focused projects, like stopping the spread of white-nose syndrome or saving Mole Kingsnakes or preventing bird-window collisions, we can start filling a small bucket. Many of us could do that — devote ourselves to one thing and make a tremendous impact on a small domain.”

*Robert Powell*

Department of Biology, Avila University  
Kansas City, Missouri

*Billie C. Harrison*

Ph.D. Candidate, University of Wisconsin, Milwaukee  
Outreach Coordinator, Eastern Massasauga SSP