

ANIMAL BEHAVIOR

Considering nonhuman culture

Animals have much to teach us about communication, mate preference, and social hierarchy

By **Mary Ellen Hannibal**

Nonhuman culture has been hugely underestimated, to the detriment of both *Homo sapiens* and the creatures with whom we share Earth, argues Carl Safina in his new book, *Becoming Wild*. Framing culture as a process of learned behaviors that help shape modes of living, Safina's bracing and enlightening book focuses on three distinct dimensions of nonhuman life: In sperm whales, Safina finds layered communication strategies for organizing and maintaining family and clan. In macaws and other visually stunning animals, he finds that beauty is an enduring cultural attribute. And in Uganda's Budongo Forest, Safina focuses on the nuances of chimpanzee behaviors by which social structure is established and enforced.

As he did in *Beyond Words*, in this book Safina wants to decenter the human (1). He considers the persistent influence of Aristotle's *scala naturae*, which ordered the universe into a ladder with God at the top, *Homo sapiens* next, and animals and plants below, with each layer having priority over those under it. We may balk at such an antiquated conception of life, but how many of us regularly consider the individuality and subjectivity of the nonhuman life around us?

Readers follow along as Shane Gero, cruising off the coast of the small Caribbean island Dominica, drops a hydrophone into the deep waters. The immensity of sea and sky are suddenly populated with evidence of a booming unseen. Gero's equipment detects sonar clicks made by sperm whales miles away, allowing him to eavesdrop on a complex, multilevel communication network. Gero, a marine biologist, uses bioacoustics to classify different call types among the whales, who use unique calls to recognize each other, keep themselves segregated by clan, and make movement decisions. Clicking may be instinctive and inherited, but the finer characteristics of the sounds are learned. The fact that these whales learn from each other is evidence

that their lives are more than competition, predation, survival, and selection—they include social learning and culture.

Safina is a marine biologist, and his writing on the watery depths and its denizens is sublime. Traveling with Gero at a fast clip, Safina writes, "We're at what's called sea level, as though an ocean is solely superficial...In reality we are skimming the thick, wide, densely inhabited world beneath us. The vast majority of the life on Earth flows through the universe below."

Sperm whales, we learn, have the only "cultural groupings that exist at transoce-



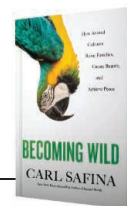
Sperm whales rely on complex communication strategies to organize and maintain family and clan.

anic scale. Everywhere sperm whales have been studied...researchers see attraction within clans, repulsion between." These whales thus evince a sense of self, identifying themselves as individuals among other individuals that belong to distinct groups. Such fascinating realizations have practical impacts.

For hundreds of years, whales have been hunted to near or outright extinction. Their decimation continues today. Taking out individual whales has reverberating impacts, both in the ocean ecosystem at large and among the family and clan groups that these individual whales help to cohere.

Safina ponders beauty in the animal kingdom while exploring the Tambopata

Becoming Wild:
How Animal Cultures Raise
Families, Create Beauty,
and Achieve Peace
Carl Safina
Henry Holt, 2020. 384 pp.



Macaw Project, an endeavor to understand the ecology of macaws and other parrots in order to help conserve them in the lowlands of southeastern Peru. He is beguiled by the dozen and a half species of "spectacularly huge, spectacularly hued" birds. These charms also make them very attractive to the exotic pet trade, which is one of the reasons for the birds' vast decline. (Macaw populations are also being decimated today as a result of habitat loss and fragmentation.)

The extravagance of macaws begs one of the longest-standing questions in evolutionary biology: Why and how would natural selection result in the seeming superfluousness of such great beauty? Here, Safina references the work of ornithologist Richard Prum, who has recently argued that Darwin was right in asserting that beautiful males are thus because females like them that way (2).

"And what of the beautiful macaws who have expanded my soul?" Safina asks. Noting that beauty is a "realm of diversity," he wonders what will happen if human impacts continue to simplify that diversity: "What are the implications for the continued evolution of beauty—or for the survival of the beautiful?"

Chimps, we learn in the book's final section, share not only most of our DNA but also a lot of our behaviors. And while these include degrees of altruism and empathy, in general, it is not a pretty picture. Safina recounts the example of a male chimp that beat and eventually murdered a female, evidently because she refused to follow him around when he demanded that she do so. "Violence from *inside* the community; that's what's unusual about chimps—and about us," he writes.

Some of Safina's assertions may require tweaks and adjustments as more data come in—the study of cognition, both animal and human, is still in its infancy—but in stretching his own mind, he challenges us to be more acutely aware of species whose social lives have much to teach us. ■

REFERENCES AND NOTES

1. C. Safina, *Beyond Words: What Animals Think and Feel* (Henry Holt, 2015).
2. R. O. Prum, *The Evolution of Beauty: How Darwin's Forgotten Theory of Mate Choice Shapes the Animal World—and Us* (Doubleday, 2017).

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