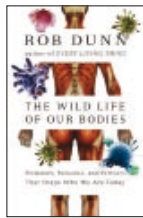


The beasties that made us human

We have lost a connection with the species that shaped our bodies, **Courtney Humphries** learns

The Wild Life of Our Bodies by Rob Dunn, Harper, £16.99/\$26.99



THERE has been no shortage of nostalgia for the “good old days” of human prehistory, when our hunter-gatherer ancestors lived in ecological

harmony with nature, roaming savannahs instead of cramped in office chairs. In *The Wild Life of Our Bodies*, Rob Dunn shares the view of modern human life as a paradise lost, but the loss he laments is not merely of a vague sense of being one with nature. What we have sacrificed, he argues, is a physical connection with the species that shaped our bodies – from our physique to the immune system.

As humans became urban and industrial, we also separated ourselves from other species. Pets aside, we have laboured to rid our houses and cities of creatures – not just visible predators and pests but also the microbes on our countertops and hands. Some of these steps were sensible acts of self-preservation, but others were driven by an ideology of humans as separate from nature. Dunn, a biologist at North Carolina State University as well as a science journalist, catalogues the dangers of that ideology.

To illustrate how species influence one another’s evolution, he points to the pronghorn, a small antelope-like mammal in North America that runs inexplicably fast. The pronghorn’s speed, Dunn says, only makes

We are still haunted by ghosts of the organisms that shaped our evolution

sense if you consider the large predators that once hunted it. The “pronghorn principle” also applies to the human body. We too are “haunted by ghosts” of parasites, pathogens and predators that shaped our evolution.

Dunn makes the case that the influence of these ghosts can be seen in our immune systems. He highlights early evidence suggesting that chronic inflammatory diseases of modern society, such as Crohn’s disease, diabetes and asthma, could be alleviated by repopulating our bodies with the parasites we evolved with. Our bodies rely so much on gut bacteria that we even give them a safe house

in the form of the appendix, Dunn points out, yet our love for antibiotics could be undermining this important relationship.

Dunn also highlights research that shows how we are shaped by the species we have eaten – and that once ate us. Our brains are still wired to avoid predators we no longer encounter: our adrenal system responds to modern daily stresses as if they were mortal threats, for example, and one theory holds that our acute vision may have evolved specifically to avoid venomous snakes. Meanwhile, as we domesticated plants and animals in our quest for survival, we too became domesticated, evolving

the ability to drink cows’ milk and break down the starch in grains more efficiently.

Dunn makes the case for these connections through detours and anecdotes, with lively stories of patients and scientists, and research spanning archaeology, field biology, medicine, ecology and microbiology. The elaborate

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fungus farms of leafcutter ant colonies, for instance, become a metaphor for understanding how we humans cultivate bacteria with our immune systems. By drawing connections between work that seems unrelated, Dunn repeatedly drives home his key point: we ignore the lessons of ecology at our peril. By trying to separate ourselves from nature, we have tricked ourselves into believing we are self-sufficient.

Looking for a better way forward, Dunn is practical. Rather than issue a blanket call for “more nature”, he advocates applying the lessons of studying our own ecology. Instead of surrounding ourselves only with the plants and animals we find most appealing, we also need to be aware of creatures that help keep our instincts sharp, and species like worms and bacteria that keep our immune systems in check.

Dunn doesn’t go so far as to suggest letting predators loose in Central Park, but he does argue for more diversity in the species we interact with and eat. As he writes, “What is missing from our lives is not nature, but a kind of nature that most benefits us.” n



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