

Converging Ills in America's Ecosystems

Breakpoint: Reckoning with America's Environmental Crises. Jeremy Jackson and Steve Chapple. Yale University Press, 2018. 320 pp., illus. \$26.00. (ISBN: 9780300179392 cloth).

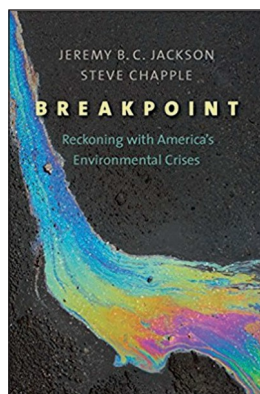
Only half a lifetime ago, conservation biologists were usually preoccupied with single species that might become extinct. The catchphrases of the time reflected an outlook that seems optimistic now. Individual species in trouble were said to be early warning signals, like canaries in coalmines, or small but essential, like rivets in airplanes—the works and windings of natural systems, which no sane tinkerer would cast aside.

Next, it became apparent that in order to save a checkerspot butterfly, a dusky seaside sparrow, a grizzly, or some other species, we had to figure out how to protect a large, sustaining portion of its habitat. More and more of those were also found to be at risk. A functioning ark was going to need more than just the plants and animals in order to bear the growing lists of the vulnerable into an uncertain future.

Then, the research began to register that whole classes of animals across a wide geography were in trouble—so many that the politically impotent US Fish and Wildlife Service fell years behind in trying to process candidates for its national lists of the threatened or endangered that were supposed to be under some measure of federal protection.

By now, the scale of the conversation has moved from single kinds of frogs or flowers all the way to continents and the whole planet, including our own species. Fifteen thousand scientists are the figurative coauthors of a recent paper, a “warning to humanity” that major environmental threats are quickly worsening (<https://doi.org/10.1093/biosci/bix125>).

It is a warning that, in the United States at least, comparatively few citizens have heard, understood, and bought into. For journalists and scientists alike, then, the difficult puzzle is how to tell the science research story in a way that effectively penetrates public consciousness. “Dire” alone won’t work; we are too busy with other threats at various scales for yet another beep-alarm to claim our attention for long.



So that is the storytelling challenge that confronts the new book *Breakpoint*. It has a promising set of coauthors. First is the marine ecologist and TED talker Jeremy Jackson, a Scripps Institution emeritus long concerned with finding innovative and provocative paths into the public mind. These include his founding role, a few years ago, in the Shifting Baselines Ocean Media Project, which generated videos, short films, hilarious public service announcements, and stand-up comedy contests, all intended to counteract “planetary amnesia”—the mass forgetting of mounting losses in the natural environment.

His coauthor for this book is veteran journalist Steve Chapple. Their stated goal is to provide a “reckoning with America’s environmental crises” that, they write, will make a contribution to “a new way of thinking” about these converging ill.

So the authors have certainly met the first criterion for success in a book of this kind: They have chosen a significant topic. Although the title seems to take in all of the American environment, this narrative mostly moves us along the Mississippi River watershed from the northern plains to New Orleans and the Gulf. It reconnoiters some environmental degradations, especially the well-documented link between industrialized Midwestern maize monoculture and Gulf dead zones or between the overengineered Mississippi and its quickly submerging delta. There is detailed consideration of the tangle of diagnostics and proposed solutions for that beleaguered region.

A second requirement is adherence to what might be called a hierarchy of credibility. *Breakpoint* is pitched to a general readership, not to scientists. But as journalism, its analysis and conclusions should rest as often as is possible on some form of original reporting or on peer-reviewed or government-sponsored research to back up significant assertions of fact.

The authors falter here for reasons that are not apparent, instead relying heavily on secondary source material. The 100 or so chapter notes for the first third of the book alone include 10 references to the *New York Times* and 25 references to various other magazines and newspapers. Some use of materials such as these is unavoidable, but they should usually be only a starting point for rigorous reporting. Most disappointingly, Wikipedia.com, a third-level source that even the most casual readers are wary of, is cited on some 30 occasions by *Breakpoint*.

This is not mere prissiness, and it does not imply that mainstream journalism is generally unreliable. Instead, it acknowledges that random inaccuracies and misunderstandings occur from time to time, so reinterviewing and reconfirming is a corrective;

that journalists do not want merely to rehash others' reporting, blog-style; and that even accurate reporting may quickly become outdated or be incomplete.

Jackson and Chapple made extensive forays across mid-American landscapes to talk with farmers, fishers, ethanol plant operators, and the proprietor of a backcountry bayou lodge. They relate significant and surprising details at times, and this kind of reporting can engage readers in a way that arid research data do not: to bring its conclusions to life and down to a human scale in a convincing way.

The book seems to lose focus at times, however, during these visits. The details—the menus, the dogs, the sports banter, and the other local color—do not enthrall. Some interviews are succinct and worthwhile. Others include long, undigested drafts

of quoted material that never quite coalesce to make a significant point.

More than halfway through, readers are informed that the authors' fact gathering has concluded and that now it is time to sort things out to "consider what we had learned." That is a long wait. But here, the storyline becomes more confident and less discursive. The focus widens, for 27 pages, to a discussion of sea-level rise and global climate disruption and then narrows again for a final two chapters on agricultural reforms.

An epilogue that is far longer than all but one other chapter—material that might have been incorporated effectively in earlier sections that discussed the same topics—arrives at the unexceptionable conclusion that "Americans must pull together as one" in order to wean ourselves from fossil fuels.

Breakpoint aids understanding of a range of environmental issues. It argues with conviction that agricultural disarray, climate disruption, and sea-level rise are reaching critical stages. Other items on its ambitious to-do list—the promised "reckoning" and "new way of thinking" about such issues, for example—are addressed more clearly in other books.

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