Time *and* NATURE

BY JOSEPH E. TAYLOR III

What role do academic historians play in natural resource management?

If you have read this far, then you care about natural resources; if you care about nature, then you should care about the discipline of history. I know this is a hard sell. Most Americans regard academic historians as esoteric and boring. Some have merit, yet like most Americans through time, they toss the baby with the bathwater. When Alexis de Tocqueville toured the United States in 1831, he observed that the average American man disregarded "his ancestors," ignored "his descendants," and separated himself from "his contemporaries." At times he seemed confined "entirely within the solitude of his own heart." Tocqueville was so disturbed by this that he coined a new word: "Individualism." That label stuck, and ever since legions of prophets have, like Ralph Waldo Emerson, counseled Americans to "Trust thyself," "Insist on yourself," that nothing "can bring you peace but yourself." This is empowering, yet believing we are the architects of our own fate has also led us to believe that the past does not matter. This is the cultural backdrop I and other historians face when we try to teach bright, energetic souls who are nevertheless convinced that academic history is quaint and irrelevant. Even sage business, scientific, and political leaders express these assumptions.[1]

One notable exception is in the field of natural resource politics, where competing interests regularly invoke the past to persuade policy makers. All pay considerable attention to the implications of legislative and judicial precedence, and all follow the long-term trends of science, technology, and nature. In these ways historical analysis does inform forestry, grazing, irrigation, and hydroelectric politics, especially in the West where most battles revolve around access to public resources. No issue is more freighted by the past than Pacific salmon. As the National Research Council noted in a 1996 report, "the life history of salmon is intertwined with human history," and because salmon migrate vast distances, they have historically linked habitat to water in ways that now affect nearly every Westerner. Thus most residents of the region are steeped in and vexed by the competing narratives about declines in salmon and the communities that depend upon them and their environments.[2]

This broad awareness of salmon's history might seem hopeful to historians, but this is not the case. Certainly the rising consciousness of the past's relevance is welcome, but how people in the natural resource community engage the past still diverges significantly from the disciplined methodology of my profession. From the historians' perspective, what we see is an instrumental approach, a tendency by advocates, scientists, and managers to sift the documentary evidence for those bits which best support a particular position or model. Sheila Jasanoff, a leading scholar in science and technologies studies, calls this an "adversarial structure." The litigious context in which history and science are invoked encourages participants to bias their presentations and let panels, agencies, and courts adjudicate the differences. This is not how academic historians practice their craft, and the disparities are important.[3]

Although we share with advocates, scientists, and others an interest in the past, academic historians take a disciplined approach that diverges significantly from other modes of story telling. As historian William Cronon notes, we hew religiously to a few crucially conservative and distinguishing rules. While we are highly creative in our use of sources and methodologies, we cannot, like novelists, "contravene known facts about the past." We must deal with all of life's messy and contradictory details, which also means that we cannot, like advocates, "be arbitrary in deciding whether a fact does or does not belong." The result is a form of narrative that is less amenable to the advocacy approach to policy making but, in exchange, far more comprehensive and nuanced. Finally, to the extent that we tell tales about human relations with nature, we must heed the strictures of science and "make ecological sense." The result is an approach to story telling that can annoy. Historians' fealty to the complexity and ambiguity of life dissuades us from the prosecutorial tones of the grey papers and briefs that frame public discourse. We are by training and familiarity with the evidence resistant to the adversarial structure, and our respect for the contingencies of life makes us balk when asked to predict the future because we know from deep research how seldom our species has ever understood what was coming next.[4]

It is no wonder we seem useless in policy forums, yet the dismissals are shortsighted. Historians' disciplined approach is crucial to natural resource management because of what we have learned about environmental relations. Although North Americans yearn for pristine nature, locating that pure and separate world is difficult. Wherever we look, at whatever period in the last millennium, we see the human hand. Well before 1492 people were burning landscapes, diverting waters, and reshaping ecologies. Thus establishing a natural condition is not simply an ecological but a cultural equation. This is especially true in the Pacific Northwest, where ideas about wild salmon, and their implications on stream management, collide not only with the material impacts of aboriginal, industrial, and angler fisheries but also with the cultural framing of fish as food or game or pest. As historians note over and over, every conservation battle has been a struggle over which nature and whose nature would be conserved. The historian's approach can clarify issues in ways no adversarial narrative will.[5]

Technology raises different historical problems. The FERC relicensing process has launched heated debates about moribund dams. Partisans focus selectively

on impacts, emphasizing the benefits or costs of impounded conditions in support of their particular solution. Often lost is the history dams themselves create in terms of toxins and heavy metals that accumulate in backed-up sediment. A discussion of breaching thus requires a broad, often ambiguous historical consideration of activities that have occurred in upstream landscapes for sometimes decades or even centuries. Fish hatcheries show similar complications. ESA listings have become a key driver in salmon management by placing tremendous emphasis on protecting "wild" genetic stock. But as the ruling in Alsea Valley Alliance v. Evans revealed, "wild" is not a priori the same thing as "primordial" because of how transplanting programs homogenized hatchery and non-hatchery stocks over time, thus mooting claims that protecting naturally-reproducing stock is always warranted. As the ESA's opponents learned in Oregon Trollers v. Gutierrez, however, transplanting was haphazard, and many runs do remain genetically distinct.[6]

If these messy, complicating details require us to study the human history of nature, it is equally true that we should examine the environmental contexts of society. There has always been a tendency in natural resource politics to simplify and dismiss opponents. During the battle over Hetch Hetchy, San Franciscans cast the Sierra Club as tools of monopolists. A century later a Sierra Club chairman portrayed local watershed councils as dupes of industry. Neither was accurate, but the caricatures shaped listeners who did not know these communities. The Sierra Club was actually divided by the proposal to dam the Tuolumne River and in no simple way aligned with power and water interests, and even tiny watersheds such as California's Mattole River or Oregon's Nestucca River contain kaleidoscopic material and cultural divisions depending on the location, tenure, and livelihood of residents. More vexingly, the lessons of one basin are only applicable to the next to the degree we recognize the inherently local dynamics of natural resource politics, yet as a recent pact to breach four Klamath River dams illustrated, local participation is crucial to achieving workable solutions.[7]

Many natural resource scientists and advocates do realize the past matters to the present and future, but how they engage history is problematic. A National Research Council committee tried to establish a baseline for a native oyster species on Point Reyes by extrapolating historical remarks about estuaries sometimes hundreds of miles away. A group at the University of British Columbia quantified marine ecology around the Falkland Islands by compiling three centuries' worth of anecdotes from passing ships. A team at the University of New Hampshire modeled cod biomass on the Scotian shelf in 1852 by quantifying conversations among ship captains. These examples of historical ecology are admirable for their ambition, yet their methods are woeful. All take an instrumental approach to evidence, and all try to transform qualitative remarks into quantitative data by converting nominal evidence into ordinal information and then assigning interval values. The resulting assertions mask any sense that historical documents are not transparent, that biases of authors and intended audiences are inherently relevant to the interpretation of evidence.[8]

Such analytical slippages suggest massive flaws in how the natural resource community practices history. In the quest for numbers, we see systemic misunderstandings about what documents can reveal. This is where the historians' discipline matters. As historian Katharine Anderson notes, researchers stumble when they ignore or devalue "evidence about changes in how and why human beings have observed and counted in different times and places." Put another way, data is produced in time and space, and it always reflects its context. Thus before researchers can interpret a document they must learn its social and cultural history. This is what academically-trained historians do. We study both the specific details and the general contexts, and that is why the natural resource community needs us. We are crucial resources for understanding human perceptions of nature.[9]

The study of western water cannot be abstracted from the things that live and inhere in it because fish, opportunity, recreation, and wildness are central to people's lives and to the stories they tell about themselves and their environments. Water matters in all its parts, not just the bits that seem most relevant or most easily quantified.

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I believe academically-trained historians are better at this than other scholars, but my intent is less to create jobs than to sell the discipline. It would be chauvinistic to insist that scholarly historians are the

only ones who can do history well, partly because criticisms about opaque writing have merit and partly because holding a PhD is no guarantee of wisdom, but ultimately the distinction is not the PhD but the discipline. Among the most nuanced recent contributions in historical ecology is the work of the World Whaling Project, a research group directed by a biologist. The team includes no historians, but they took pains to learn historical methodology before wading into a vast documentary trove on nineteenth-century whaling. Rather than simply extract population and location data, though, they cross-checked federal abstracts with the original captains' logs. The result was a smaller but more robust dataset that limits their ability to estimate populations but has enabled them to correct species range maps, some dating to the 1850s. This is by any metric very sophisticated history, and it helps underscore my point that some people do history better than others. The key is to take seriously the discipline of history.[10]

About the Author

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Endnotes

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[2]National Research Council, Upstream: Salmon and Society in the Pacific Northwest (Washington: National Academy Press, 1996), 46.

[3]Sheila Jasanoff, Science at the Bar: Law, Science, and Technology in America (Cambridge, Mass.: Harvard University Press, 1995), 44.

[4]William Cronon, "A Place for Stories: Nature, History, and Narrative," Journal of American History 78 (March 1992), 1372-73.

[5]For pristine see William Denevan, "The Pristine Myth: The Landscape of the Americas in 1492," Annals of the American Association of Geographers 82 (September 1992), 369-85. For fire see Steven J. Pyne, Fire in America: A Cultural History of Wildland and Rural Fire (Princeton: Princeton University Press, 1982); Steven J. Pyne, Awful Splendor: A Fire History of Canada (Vancouver, B.C.: UBC Press, 2008). For salmon see Joseph E. Taylor III, Making Salmon: An Environmental History of the Northwest Fisheries Crisis (Seattle: University of Washington Press, 1999).

[6]For dams see Richard White, The Organic Machine: The Remaking of the Columbia River (New York: Hill and Wang, 1995). For fish culture see Taylor, Making Salmon; Alsea Valley Alliance v. Evans, 161 F.Supp.2d 1154; Oregon Trollers Association v. Gutierrez, 452 F3d 1104; Kristin A. Gaston, "Salmon, Hatcheries, and the Endangered Species Act: Alsea Valley Alliance v. Evans and Its Implications," Virginia Environmental Law Journal 22 (2003), 123-66.

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[8]National Research Council, Shellfish Mariculture in Drakes Estero, Point Reyes National Seashore, California (Washington: National Academy of Sciences, 2009), 19-23; Maria Lourdes D. Palomares, Elizabeth Mohammed, and Daniel Pauly, "On European Expeditions as a Source of Historical Abundance Data on Marine Organisms: A Case Study of the Falkland Islands," Environmental History 11 (October 2006), 835-47; Andrew A. Rosenberg, W. Jeffrey Bolster, Karen E. Alexander, William B. Leavenworth, Andrew B. Cooper, Matthew G. McKenzie, "The History of Ocean Resources: Modeling Cod Biomass Using Historical Records," Frontiers in Ecology and the Environment 3 (March 2005), 78-84. I thank Steve Kolmes for pointing out that this epistemological conversion occurs regularly in fisheries assessments. See e.g. Paul McElhany, Tom Backman, Craig Busack, Steve Kolmes, Jim Myers, Dan Rawding, Ashley Steel, Cleve Steward, Tim Whitesel, and Chuck Willis, "Status Evaluation of Salmon and Steelhead Populations in the Willamette and Lower Columbia River Basins (Seattle: Northwest Fisheries Science Center, National Oceanic and Atmospheric Administration, 2004), 3-6; 39-49.

[9]Katharine Anderson, "Does History Count?" Endeavour 30 (November 2006), 154.

[10]Randall R. Reeves, Elizabeth Josephson, Tim D. Smith, "Putative Historical Occurrence of North Atlantic Right Whales in Mid-Latitude Offshore Waters: 'Maury's Smear' Is Likely Apocryphal," Marine Ecology Progress Series 282 (2004), 295-305; Elizabeth Josephson, Tim D. Smith, and Randall R. Reeves, "Historical Distribution of Right Whales in the North Pacific," Fish and Fisheries 9 (June 2008), 255-68.