

The Practical Uses of Fisheries History

"History, N. an account, mostly false, of events mostly unimportant, which are brought about by rulers, mostly knaves, and soldiers, mostly fools."

—Ambrose Bierce (1911)

By Larry A. Nielsen

ABSTRACT

Fisheries history has four practical uses. First, it helps us avoid bad decisions by providing a long-term vision of what we have tried and how it has worked. Second, history provides an accurate perspective on the development of our profession, verifying that conditions are neither as bad nor as good as they seem. Third, history informs the inventory stage of strategic planning, providing the baselines for setting management goals and objectives. Fourth, historical information can be used as experiments to address long-term ecological and management questions. Because of these uses, we must preserve our current work—gray literature, survey data, museum specimens, personal diaries and recollections—as the history of the future.

EVER WONDER where people find those quotes for the beginning of their prose? Me, too. I found this in the *Penguin Dictionary of Modern Humorous Quotations* (Metcalf 1986). I resisted starting with a quotation until I realized that it proves my basic point—history is useful.

That dictionary is a history book. It contains a historical list of quotes that I can use to appear educated, creative, witty. This may be a trivial use of history, but a practiced historical splitter could undoubtedly compile a long list of truly important uses. However, I am an amateur, and therefore I present only four practical uses of fisheries history.

History helps us avoid bad decisions.

We are all historians, and we delight in our personal histories; we call them *memories*. Fortunately for our egos but unfortunately for truth, we remember selectively. "When I was young..." is the beginning of many conversations, professional and personal, that lead us to false assessments of the present. Robert McNamara (1995), in his book about Vietnam, asserts that often "memorists rely on their recollections. This leads them, however honest their intent, to remember what they wish to remember—what they wish had happened—rather than what actually occurred" (p. xvii). Good historical information can keep us from indulging our fancies and, more important, from acting on them.

Many social commentators, such as Hughes (1993) and Limbaugh (1992), have drawn our attention to the decline of society. A favorite story is the rapid, steady growth of our economy and standard-of-living from World War II through the mid-1960s, and their relative stagnation since then (Fig. 1). They ask, "What has gone wrong?" and then provide their answers and prescriptions (usually dramatic prescriptions). However, historians would ask that we extend our analysis back a bit farther—to 1900, perhaps. Then we might find that a relatively flat economy, punctuated by fluctuations, is the norm, not the anomaly

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(Fig. 1)—and the interesting questions become, "What happened between 1945 and 1965? Was it good or bad? Could we make it happen again? And, if we could, would we want to?"

A longer historical perspective will keep us from making bad conclusions and, therefore, carrying out programs to fix them. A current university fixation is high-tech teaching. Across the nation, administrators and faculty are racing to put computer screens in front of students. Is this a new idea? No. In the 1960s, when baby boomers were booming onto campus, universities sought to overcome teacher and classroom shortages with auto-tutorial, computerized teaching. Today, universities don't have enough money, so they are trying the same strategy. Universities learned then that students hated machines and loved living teachers—even the ones they complained about. Will machine-teaching be more successful this time? Perhaps, given the total invasion of electronic devices into our lives. Whatever the outcome, an intense look at the history of earlier technological teaching might keep us from wasting time, money, and creativity—again.

History also can influence our responses to supposedly new ideas in fisheries management. As sure as plankton blooms in the spring, demand for stricter (or more lenient) fishing regulations comes up regularly (Eschmeyer 1949); demand for more (or less) stocking does the same (James et al. 1944). Along with these come stories that begin, "When I was young, . . ." Because our interest groups and legislatures have rotating memberships with short memories, historical data, reports, and analyses can help us explain what we have tried and what the old days were really like.

History gives us more accurate perspectives.

This use of history is properly a corollary to the first. If the first benefit is purely practical—help us avoid mistakes—the second is more intellectual: History helps us know from where we have come.

Let me illustrate with a brief history lesson. We often say that conservation began with Theodore (Teddy) Roosevelt's 1908 Governors' Conference, like a miracle of spontaneous creation. Of course, this is wrong. The path of conservation

thinking can be traced across American history, from European antecedents that accompanied settlers, through the era of conquest in the early 1800s, the emergence of an American naturalistic personality in the mid-1800s, the application of science to mechanical arts via land-grant schools in the late 1800s, the growing realization of resource depletion at the turn of the century, and the Progressive Movement of the early 1900s (Nielsen 1993). Wrapped in this Progressive political philosophy were Teddy Roosevelt and Gifford Pinchot, who didn't so much start the movement as name it (Pinchot 1910).

So what is the difference if we know our history or not? The difference is that when we know from where we came, we can better accept where we are now. For example, if we understand that natural resources, including fish, have been embedded from the beginning in the larger political landscape (Nielsen and McMullin 1992), then we can temper a personal aversion

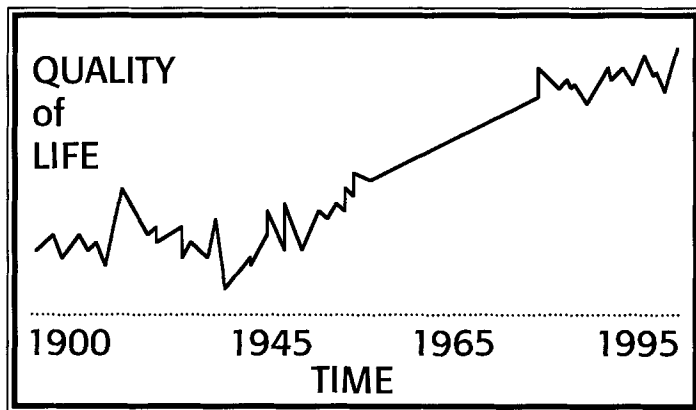


Fig. 1. The fast growth of the U.S. economy and quality of life between 1945 and 1965 and their relative stagnation since then prompts the question, "What has gone wrong?" Extending the analysis back to 1900 shows that a flat economy with some fluctuations is normal, not unique.

to politics or "paying attention to the customer." We have always had to pay attention to the customer!

A historical context can give us another valuable lesson—humility. Bill Dill (1994) recently chastised us for not citing early studies, using the particular example of angler motivation literature. A long-term review of fisheries literature would show that anglers have always valued the nonharvest parts of fishing and that many people have studied those interests through time. Fisheries sociologists, along with all other researchers, build on a significant foundation of past work.

History is also comforting. It's good to know that those who came before us suffered the same frustrations and doubts that we do. Budget cuts and personnel shortages are nothing new, yet we have somehow always survived them. Knowing that fisheries professionals in the 1950s also thought their agencies needed reform (e.g., Voigt 1952) helps us fight off pessimism now. The world today is much as it always was—and there will be fish in the creek tomorrow.

History supports strategic planning.

Like it or not, strategic planning is the basis for how we manage fisheries—and will be more so in the future. We expect resources to be managed objectively and scientifically. Agencies are adopting ecosystem management (and its synonyms) at breakneck pace—that philosophy suggests expanding the scales of management, in time, space, and kind of benefit. All of this

demands more careful and explicit attention to what we are doing—precisely the purpose of strategic planning.

Today's strategic planning is one element of a comprehensive system (Fig. 2). The model contains four stages, including inventory, strategic planning, implementation, and evaluation (Crowe 1983). The inventory stage asks the question, "Where are we?" However, we cannot expect to anticipate all the data we need and then to collect them systematically once we have detected a problem. Therefore, the inventory question often becomes, "Does anyone know where we've been?"

That question is basic to every management decision but is tantamount for many contemporary issues. Influential stakeholders exhort us to reestablish the past, a past characterized by luxuriant natural ecosystems with abundant populations of diverse species and self-regulating processes that gently buffered nature's cycles. Or was it that way? Or was it like *Jurassic Park*?

History can help define those baseline conditions. The baselines come from old data sets, samples stored in museums and dilapidated field-station outbuildings, reports of biological surveys, and diaries by amateur naturalists. Harriet Bell Carlander's (1954) history of Mississippi River fisheries gives clues to habitats where endangered mussels can be restored. Commercial fish statistics provide indices to long-term stock abundance in the Pacific Northwest and Great Lakes (Baldwin and Saalfeld 1962). Museum specimens give tissue for establishing genetic identity of stocks for restoration and protection (Nielsen 1992).

However, the use of history in this regard requires a broad tolerance for format and content. One of these forms is the so-called gray literature (e.g., agency reports, impact assessments, master site plans). Scientists and journal publishers disparage gray literature because it is not experimental, replicated, or peer-reviewed (Collette 1990). However, more management decisions are surely based on such information rather than on research-quality data. Decisions have to be made that way—that's why it's called "management" (Nielsen et al. 1989). The more data available, the better those decisions will be. Therefore, we should praise rather than disdain gray literature, and encourage the archiving of these data—historical data—so they will be accessible later, when and if needed.

History allows experimentation with the past.

Even without *Back to the Future's* DeLorean time machine, we can do research in the past. The purest experiment, of course, follows a linear process beginning with hypothesis

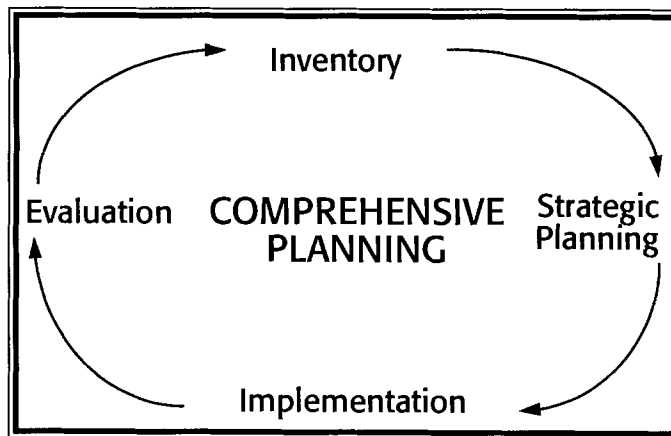


Fig. 2. The four stages in the comprehensive management system model used widely in fisheries and wildlife.

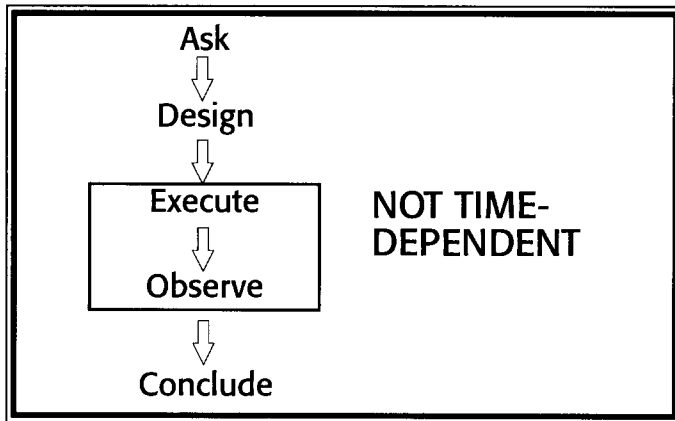


Fig. 3. The typical model of the experiment indicates that the executive and data collection stages can be conducted nonsequentially.

formation and continuing stepwise through design, execution, observation, and conclusion (Fig. 3). The process does not need to be sequential. Both the execution and observation stages can be done before the hypothesis is set.

A pertinent example is the analysis of reservoir planning conducted by the Sport Fishing Institute (Prosser 1984). Its project sought to evaluate whether pre-impoundment impact predictions had been accurate. Norville Prosser, who led the work, established a series of criteria for selecting "data-collection sites." An appropriate site required detailed pre-impoundment data. From an initial list of hundreds of reservoir projects, the institute selected 20 for study. The study team then spent several years comparing the predictions and outcomes.

This study is instructive for two reasons. First, the study would not have been possible without extensive gray literature—reports compiled and stored by state agencies, Corps of Engineers' offices, and others. Even those data are rare. Most reservoirs couldn't be studied because they lacked data. In the design of historical experiments, therefore, explicit criteria are essential for defining what will and will not be considered suitable sites, treatments, and data.

Second, this study could only have been conducted historically. We do not have the patience or foresight to design such studies in advance and then faithfully collect the data. In fact, most ecosystem studies may have to be conducted as historical experiments—because we will seldom know in advance where to look or what to look for.

Today's work is tomorrow's history.

These four values of history could be lumped as one: History helps us think and act better. We use history to base our planning, test our hypotheses, temper our personal biases, and preserve a healthy perspective on life. Given these practical values of history, we owe future generations a record of what is happening now.

We must record our history on purpose. Consider the Sport Fish Restoration Program (Wallop-Breaux Act of 1985). Do we know how it happened? Surely we have the chronology of formal events tucked away somewhere. But history doesn't happen via formal documents and meetings when the video cameras are recording. History happens behind closed doors, across lunch tables, and in canoes. We don't know what really happened when a few tired workers finally agreed on the Wallop-Breaux program we have today. When Carl Sullivan, former

executive director of the American Fisheries Society and one of those workers, died, we lost a piece of that history forever.

This is the history that we must—and can—preserve. By most accounts, the profession of fisheries is still young. The first generation of professionals is gone, but most of the second is still active, and the third is at the top of the profession. Now, when memories are still vivid, we should capture them—on paper and videotape, through collections of letters, reports, and notebooks, on cocktail napkins, if necessary. As my *Penguin Dictionary of Modern Humorous Quotations* also notes,

"History is too serious to be left to historians."

—Iain Macleod (1961)

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