BOOK REVIEWS

Rik Scarce. *Fishy Business: Salmon, Biology, and the Social Construction of Nature*. Philadelphia: Temple University Press, 2000.

From Monterey to the Arctic Circle, the best way of defining a western river is to say that it is a natural river or stream frequented by migratory salmon. Salmon function as exquisitely sensitive barometers to in-stream variations in temperature, sedimentation, or pollution. As measures of ecological health, salmon do for the land what canaries did for miners underground.

In today's coastal Pacific and interior watersheds, ill fares the land. Old growth forests were felled for domestic and overseas consumption. Dammed rivers like the mighty Columbia now resemble giant plumbing contrivances. Overgrazed, arid landscapes erode into what remains of our channelized rivers. Seattle's traffic rivals that of Los Angeles. Portland's "Silicon Forest" sprawls westward where farmsteads once stood. Salmon no longer return home.

Interviews with twenty-four biologists provide the backbone for environmental sociologist Rik Scarce's book *Fishy Business*. Scarce believes that fish biologists (and the rest of us, for that matter) artificially "construct" our understanding of salmon, science, technology and Nature in the greater Pacific Northwest. He calls attention to an inverse relationship between our heroic efforts to "control" the fish and the number of self-perpetuating populations of remaining wild fish.

Through the lens of the "social construction of science and technology," Scarce reinterprets the salmon crisis. "Social constructivists" are skeptical about the existence of an overarching, objective "truth" about a real world to which scientifically justifiable knowledge may lay claim. By such logic our interpretations of "reality" derive more from our paid-for loyalties and cultural moorings than from the existence of independently verifiable, transcendent truths. Truths which do surface about nature, therefore, are "constructed" from choices made among a vast range of equally justifiable interpretations. Attributions to salmon become the sum of rational and irrational beliefs, economic power arrangements and biases inherent in any institutionally situated group. "Situated knowledges," as Donna Haraway once branded them, necessitates that one person's Coho salmon become another person's lox.

Within eight chapters, Scarce probes how biologists approach their intellectual prey, salmon. He opens with a Weberian discussion of rationalization and its discontents. Using the University of Washington School of Fisheries, Scarce illustrates a gathering eclipse of reason. Four hundred-fifty dams within the Columbia River Basin alone necessitated re-engineering salmon. Washington State's 128 federal, state and tribal fish hatcheries pump out 350 million fish annually (p. 90). There's just one problem: the artifacts hatcheries produce

are poor facsimiles for wild fish. "Dollar bills with fins," as Scarce calls them, are behaviorally and genetically inferior to what preceded them (p. 189). Hatchery shills are robbed from and overwhelm what few wild fish remain.

Scare ponders the limitations inherent in systems theory for re-engineering watersheds and their evicted inhabitants. He observes that "salmon biology shares its key metaphor with engineering: the *system*" (p. 53). Natural systems, however, are never closed in the same manner as laboratory experiments. Systems always exclude and include key phenomenon, and these same systems can seldom account for the "*struggles* that shape a network of heterogeneous and mutually sustaining elements" (p. 53).

Drawn to the "good science" lauded by conservation biologists who embrace public policy advocacy on behalf of salmon (p. 161), Scarce is sympathetic to scientists who ". . .openly identify with their research subjects . . . and profess a moral responsibility to them. . ." (p. 163). Conservation biologists, he observes, appear to be driven "almost as much by an ethical perspective as by a biological one. . ." (p. 161). Hoping that fish farming and hatcheries represent "the last gasp of a dying ichthyological ideology" (p. 170), humans must, he believes, relinquish "control [over the salmon] and [extend] the possibility of self-determination to the salmon, the stream, and all the related non-human components" (p. 153). Within his proposed alternate, ecocentric framework, Scarce wants to substitute the antithetical concepts of "freedom" and "self-determination" for salmon biologists' historic reliance on "power" and "control" (p. 152).

Self-determination is a curious but understandable choice of terms here. President Woodrow Wilson launched the "self-determination" of peoples into the rhetoric of a stillborn, early twentieth-century League of Nations. While later regretting the move, Wilson sought to draw attention to the dying embers of European colonialism and their disastrous effects overseas. Perhaps Pacific salmon themselves are victims of a kind of European colonialism which leaves as little opportunity for nature as for humanity?

Scarce's target in *Fishy Business* is unambiguous. He concludes that conservation biology "constructs salmon as important in themselves, and this is a bombshell of a break for fisheries biology" (pp. 174–75). Yet even today, Canadian-grown, transgenic Atlantic salmon are poised to enter the U. S. marketplace. Regrettably, Scarce's death knell for the biological interventions in current and historic use appears to be premature.

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