Invasives threaten salmon in Pacific Northwest

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Many native fishes in the Pacific Northwest are threatened or endangered, notably salmonids, and hundreds of millions of dollars are expended annually on researching their populations and on amelioration efforts.

Most of the attention and funding have been directed toward to the impacts of habitat alteration, hatcheries, harvest, and the hydrosystem--the "all H's." A study published in the March 2009 issue of *BioScience* concludes, however, that nonindigenous species, notably invasive fishes, appear to pose at least as much of a threat to native salmonids as the all H's, principally through predation.

The study, by Beth L. Sanderson of the Northwest Fisheries Science Center in Seattle, Washington and two colleagues, made use of a spatially explicit database that identified the presence of invasive species in roughly 1800-square-kilometer, hydrologically connected areas throughout Washington, Oregon, and Idaho. The number of invasive species in each area ranged between 86 and 486, the majority being plants and fish.

Sanderson and colleagues assembled reports of predation by six nonindigenous fish species: catfish, black and white crappie, largemouth bass, smallmouth bass, walleye, and yellow perch. Hundreds of thousands to millions of juvenile salmonids were being consumed by these species at just a handful of sites, and for some of the species, salmonids constituted a large fraction of their diet. Yet despite the clear

evidence of a substantial impact of invasive species on economically important salmonids, only a very small percentage of research funding is devoted to the potential harms to salmon resulting from invasives.

Source: American Institute of Biological Sciences