'Human Activity' Blamed for Fish Ills

By David A. Fahrenthold
Washington Post Staff Writer
Friday, February 8, 2008; B03

Federal scientists seeking to learn why male fish in the Potomac River are growing eggs said yesterday that they've made an important determination: New research shows that the fish symptoms are worse in streams near towns or near heavily farmed areas.

That finding, announced today, does not pinpoint the pollutant that is causing the "intersex" condition. It also does not answer questions about whether the abnormal fish indicate a threat to human health, as the Potomac is a major source of drinking water for the area.

But it does seem to confirm what scientists have suspected since the fish were first found in 2003. The cause, they said, is probably some pollutant created by humans -- perhaps a farm chemical, or treated sewage, which can contain human hormones or residue from birth-control pills.

Any of these might have fooled the fishes' natural hormone systems, causing male fish to take on female characteristics.

"I feel comfortable saying human activity" is the cause, said Vicki S. Blazer, a scientist with the U.S. Geological Survey and the primary author of the study. "The question is, which human activity? And is it something we can do anything about?"

Scientists first found the abnormal fish in the South Branch of the Potomac, a shallow tributary in West Virginia. Since then, they have found gender-bending properties in several fish species and in Virginia, West Virginia, Maryland and the District. The District site was near the outfall of the Blue Plains sewage plant, close to the Woodrow Wilson Bridge.

Even after these discoveries, Blazer said, scientists were nagged by one question: Was it possible that this condition was somehow natural, and not caused by pollution? If so, the condition would show up everywhere, not just in streams heavily affected by runoff from towns or farms.

They then examined a control group of smallmouth bass, caught in relatively pristine rivers outside the Potomac watershed in West Virginia. Blazer said they did find some intersex characteristics in these fish -- 22 percent of the male fish at the headwaters of the Greenbrier River, for instance, seemed to be growing eggs.

But Blazer said that conditions were much worse in the Shenadoah River, which runs through an area of Virginia thick with poultry farms and steadily gaining in population. In two of the three Shenandoah sites, she said, every fish they dissected had eggs.

She said this data seemed to confirm the theory that the more humans live or farm nearby, the more likely fish are to be abnormal.

Blazer said that the next step is to try to determine whether intersex fish are in worse overall health than others. She said that, even if the eggs do not harm the fish, the pollutants that cause them might also degrade the fishes' immune systems or their organs.