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Male Fish Exposed To Flushed Drugs Develop Ovaries



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Reporting

(WCCO) *St. Cloud, Minn.* It may be difficult to tell if fish are crying when they're already surrounded by water, but researchers do know for a fact that some of them are on Prozac.

While it may sound like a surreal joke, scientists at a St. Cloud State University laboratory are concerned by what they're finding in Minnesota waterways.

According to the research, prescription drugs flushed down toilets are turning up in the fishes' home.

"There are cases where fish don't react normally because they are exposed to antidepressants, for example," said Heiko Schoenfuss, St. Cloud State associate professor of anatomy.

As it turns out, fish being exposed to drugs isn't the whole story. Scientists are also finding that some personal care products -- including some soaps -- are having a troubling effect on fish.

"We're finding that some of these compounds will actually feminize male fish, which is kind of scientific lingo for saying that the male fish will take on certain traits that we usually only find in female fish," said Schoenfuss.

In the most extreme cases, male fish are developing ovaries.

Many may assume those compounds would get filtered out at waste water treatment plants, but it's not easy to treat all of them.

Scientists are concerned that if pharmaceuticals keep getting flushed down the toilet and certain cleaning compounds keep going down the drain, there could be long-term problems for fish.

"I guess as far as fish are concerned, when you live in Minnesota, there's a legacy that we want to protect. We don't want to hurt our fish populations in the long run," said Schoenfuss. "It's a deformity, it's an anomaly and it probably affects the reproductive ability. Of course if you have enough male fish that can't reproduce, ultimately the population could suffer."

Scientists stress this is not only an issue in Minnesota. They have also found feminine traits in male fish across the country from the Potomac River in Washington, D.C. to waterways in southern California.

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Current Events in Fish Ecology

Questions

1. The focus of this news story is to explain how some pharmaceutical chemicals are affecting the fishes in the Minnesota waterways.
2. The effect that the drugs are having on the fish in the waterways is that it is turning the male fish into male fish with feminine hormones, or in some rare instances, is causing the males to grow ovaries. This is effecting the possible mating behaviors of the fishes in the waterways.
3. The major human players in this story are the locals responsible for the pharmaceutical pollution in the Minnesotan waterways. The non-human players, or those mostly affected are the fishes whose biological functions are being severely affected.
4. The major socioeconomic issues associated with this article include the pollution of waterways and the possible economic inflation that could be associated with the decline in the reproductive abilities of the fishes of the waterways. There also appears to be a culture associated with the fishes in Minnesota.
5. The story, which appeared because of CBS reporting, appears to be accurate and unbiased, as the topic covered is commonly seen in waterways throughout the world.
6. The fish ecology knowledge that would be important here include the ability to detect the extent of pollution in the area, the ability to help the local area recover from that pollution, the ability to possibly restock the species if it continues to not be reproductively viable, and the knowledge of possible actions in the future that can reduce the amount of pollution affecting the local waterways, such as wastewater treatment facilities directed at pharmaceutical chemicals.
7. A fish ecologist would probably focus on reducing the amount of pharmaceutical products being dumped into the local waterways as that would likely be the most long-term effective method and would likely be the most economically efficient.