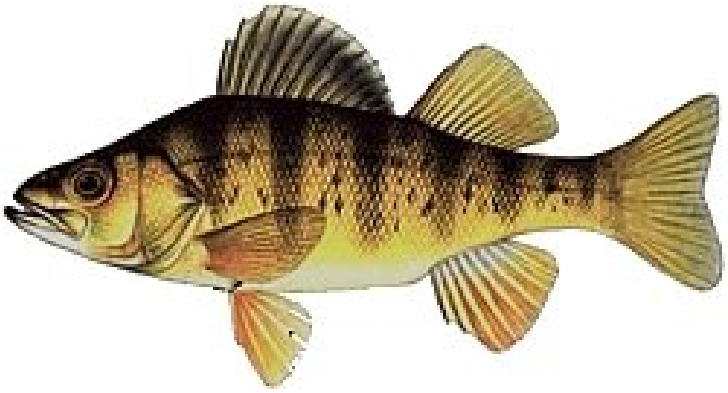
BioSpectrum
the business of Bio & Health Sciences
ASIA EDITION

Study: Fish become bold after eating sleeping pills

February 19, 2013 | News | By BioSpectrum Bureau



Singapore: A new study conducted by researchers at Umea University, Sweden, has examined how perch behaved when exposed to oxazepam, a drug commonly used to treat anxiety disorders in humans.

The study, which has been published online in the journal Science, revealed that the fish become antisocial, and wander away from the safety of the group and devours food more quickly than its peers. The findings add to the mounting evidence that minuscule amounts of drugs in rivers and streams can alter the biology and behavior of fish and other marine animals.

The research team used minute concentrations of two parts-per-billion of the anti-anxiety drug oxazepam, similar to concentrations found in real waters. The team put young wild European perch into an aquarium, exposed them to these highly diluted drugs and then carefully measured feeding, schooling, movement and hiding behavior. They found that drug-exposed fish moved more, fed more aggressively, hid less and tended to school less than unexposed fish. On average, the drugged fish were more than twice as active as the others.

Dr Tomas Brodin, an ecologist and lead author of the article, said that, "Normally, perch are shy and hunt in schools. This is a known strategy for survival and growth. But those who swam in oxazepam became considerably bolder. They lost interest in hanging out with the group."

He also said that the fish with no drugs in their system remained timid and "didn't come out at all" while those on oxazepam did. "We think it's working through stress relief on the fish. It removes the fear of being eaten." The researchers said that the behavior of the fish coupled with the tendency to scarf down food faster than normal could alter the composition of the species and lead to ecological changes in the real world.