

What Fish Can Teach Us About Our Powers of Perception

By

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Paul Starosta

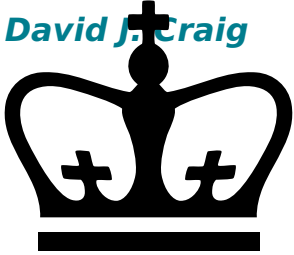
Scientists have long wondered how our brains tune out the myriad sounds produced inside our own bodies — such as the creaking of bones, the pumping of blood, and the intake of breath — and focus instead on the sounds of the outside world.

[Nathaniel Sawtell](#) and [Larry Abbott](#), neuroscientists at Columbia’s [Zuckerman Institute](#), have been making strides in solving this mystery. They have identified a section of the brain of the African elephant-nose fish (pictured above) that recognizes unimportant internal stimuli and summarily blocks them out. Now, in a [new study](#) in the journal *Neuron*, they show that when this “noise-cancellation

mechanism” is shut off, the fish become hopelessly disoriented. Sawtell and Abbott suspect that a similar mechanism is operating in the human brain and that their research could inform studies of sensory disorders such as tinnitus.

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