

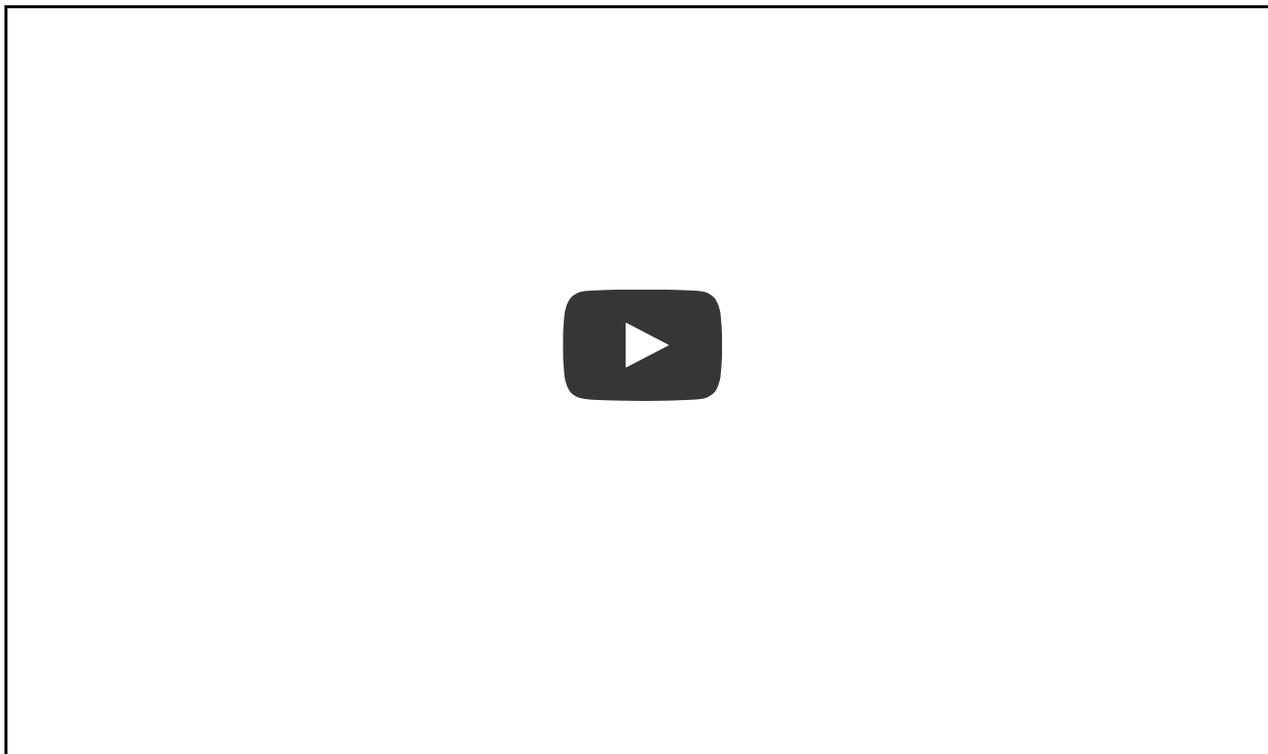
News

WATCH: Snot Bots for better whale mucus collection

BEC CREW

THURSDAY, 18 SEPTEMBER 2014

The mucus that gets expelled through a whale's blowhole can tell scientists a lot about its overall health, but current methods of collecting this fluid are difficult and stressful for the animal. Until now, thanks to the Snot Bot.



While for humans, blood tests can give a pretty good indication of what's going on with us heathwise, for whales, mucus is what scientists use to determine their hormone levels, possible pregnancies or diseases, and even the genetic information surrounding any existing congenital disorders. But collecting mucus from the largest creatures on Earth is no small feat. Not only is it dangerous for the humans trying to navigate their way around a 100-tonne behemoth in a low-flying aircraft, but it also stresses the whale out, and this can skew the results of the mucus tests.

It's not a great system, so a team of scientists from the Olin College of Engineering in the US has come up with a pretty nifty solution - a tiny mucus-collecting drone called the Snot Bot.

The Snot Bot is a little remote-controlled [quadcopter](#), about the length of your forearm, which has a surgical sponge attached to its base for gentle mucus collection, and a camera that beams a live feed of its whereabouts to the scientists operating it. Using this live feed, the scientists can direct the Snot Bot to hover over a whale's blowhole when it surfaces, and as the mucus is launched sky-high, the Snot Bot will have its sponge ready and waiting to collect.

"Any contaminants the whale is exposed to will show up in the mucus. Fluid testing can also reveal hormone levels in the whale, and the smattering of lung lining cells contained in the

blast of water can be used for DNA analysis,” [says Ryan Whitwam at Geek.com](#). “That’s a lot of data for a completely non-invasive collection method.”

But before the scientists can start deploying their new Snot Bots, they need to get approval from the US Federal Aviation Administration (FAA). This depends on how effectively they can convince the FAA that the Snot Bots are completely non-invasive and less stressful for the whales than current mucus-collecting methods. If approved, each Snot Bot is expected to cost under \$3,000, [according to Whitwam](#).