

# Air Force Completes Killer Micro Drone Project

- By [David Hambling](#) 
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- 7:00 am |
- Categories: [Drones](#)
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The Air Force Research Laboratory set out in 2008 to build the ultimate assassination robot: a tiny, armed drone for U.S. special forces to employ in terminating “high-value targets.” The military won’t say exactly what happened to this Project Anubis, named after a jackal-headed god of the dead in Egyptian mythology. But military budget documents note that Air Force engineers were successful in “develop[ing] a Micro-Air Vehicle (MAV) with innovative seeker/tracking sensor algorithms that can engage maneuvering high-value targets.”

We have seen in recent years increased strikes by larger Predator and Reaper drones using Hellfire missiles against terrorist-leadership targets in Afghanistan and Pakistan. But these have three significant drawbacks.

First, you can never be quite sure of what you hit. In 2002's notorious "[Tall Man incident](#)," CIA operatives unleashed a Hellfire at an individual near Zhawar Kili in Afghanistan's Paktia province. His unusual height convinced the drone controllers that the man was Bin Laden (who stands 6 feet, 5 inches). In fact, he was merely an innocent (if overgrown) Afghan peasant.

A second problem is that the Hellfire isn't exactly the right weapon for the mission. Originally designed as an anti-tank missile, it's not especially agile, nor is it designed to cope with a target that might swerve or dodge at the last second (like cars and motorbikes).

And thirdly, such strikes tend to affect a number of others, as well as the intended target. It raises the risk of killing or injuring innocent bystanders.

This was the rationale for Project Anubis. Special Forces already make extensive use of the [Wasp drone](#) made by AeroVironment. This is the [smallest drone in service](#), weighing less than a pound. It has an endurance of around 45 minutes, and line-of-sight control extends to 3 miles.

It might seem limited compared to larger craft, but the Wasp excels at close-in reconnaissance. Its quiet electric motor means it can get near to targets without their ever being aware of its presence.

The Air Force's 2008 budget plans described the planned Project Anubis as "a small UAV [unmanned aerial vehicle] that carries sensors, data links, and a munitions payload to [engage time-sensitive fleeting targets](#) in complex environments." It noted that after it was developed by the Air Force Research Laboratory, Anubis would be used by Air Force Special Operations Command. The total cost was to be just over half a million dollars.

No official announcements have been made since then, and the Air Force did not return a request to comment on this story (hardly surprising for a weapon so likely to be used covertly). But the [current Air Force R&D budget](#) does mention the effort, briefly. This newer document refers to Project Anubis as a development that has already been carried out. According to the budget, \$1.75 million was spent to reach the goal.

The current state of Project Anubis is unknown. It could be one of tens of thousands of military research efforts that started, made some progress and ended without a conclusion. Or Anubis could now be in the hands of Air Force Special Operations Command.

If so, Anubis would solve both of the problems associated with the Predator-Hellfire combination. It would follow and catch the most elusive target, and its ability to take a video sensor close to the target should mean it can be positively identified before the operator has to make a go or no-go decision.

(There may be a classical reference here: The god Anubis was responsible for weighing the hearts of the dead to judge whether they would have eternal life. The Project Anubis MAV will have to make similarly fine judgments.)

A tiny warhead, weighing a fraction of a pound, could mean extremely little collateral damage, compared to the 20-pound warhead on a Hellfire.

I reported in 2007 on a [rumor that the miniature Wasp drone](#) (photo at top) might get a lethal “sting.” It now appears that word of this new weaponry was more than idle talk.

*Photo: U.S. Marine Corps*

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David,

Considering that Aerovironment is the maker of so many portable UAV’s and that for years now it’s been known they have been working or worked on an armed man portable micro-UAV called the Switchblade, have you or anyone else heard of its use or recent news on it?

- Posted by: david\_2012 | 01/5/10 | 8:34 am

When you don’t see the nutella around you and you are 3 feet tall instead of 6 the nerd in you accomplish the mission targeting the Jar.

- Posted by: David Hambling | 01/5/10 | 8:53 am

@atacms : I’m currently writing a piece on armed micro-UAVs and related devices; expect to hear more about the Switchblade and its more advanced ilk in the near future.

- Posted by: Nostradances | 01/5/10 | 8:58 am

I can see MAVs mounted on the larger variety in the future. The military has already tested MAVs as passive, laser guided appliances with good success. The range and accuracy can be refined with the UAV acting as a Master/Slave setup. Enter; Marco-Polo.

- Posted by: atacms | 01/5/10 | 9:33 am

David,

Thanks, look forward to reading that piece. Perhaps you might also want to check with the Army's plans. I will have to send you if you don't have it a short blurb in an older Jane's Defense Weekly issue (circa 2002 or so) that mentioned arming the OAV with possibly a thermobaric explosive IIRC. Let me know if you need it.

- Posted by: vulturetx | 01/5/10 | 11:34 am

MAVs will be the onscene termination device after being delivered from a Global Hawk 20KMs away via a vertical glider bomb type vehicle. That way the terrorists don't get alerted from the predator flying overhead broadcasting video in the clear 😊

- Posted by: whootowl | 01/5/10 | 12:08 pm

@vulturetx : You should not expect the MAV link to be encrypted. Not that it matters; the "window of actionability" is so small, the target will not know what hit him.

- Posted by: digitalhecht | 01/5/10 | 12:49 pm

Effective or not, these things need to be included in the next Call of Duty/Medal of Honor installment!

- Posted by: esmoore5 | 01/5/10 | 1:26 pm

Whatever happened to the UAV Sniper?:

<http://sagetechnology.com/Main%20Menu/Projects/Sniper/UAV%20Sniper%20v001.pdf>

- Posted by: M4CGYV3R | 01/5/10 | 2:36 pm

As far as actual information goes, this article is a whole lot of nothing.

- Posted by: ShaJ | 01/5/10 | 5:54 pm

This sounds like a "Cool Drone" that will get the bad guys and not a lot of innocent women and children like the "Killer Drone" Wimpy Pilots do. Aim High Dude.

- Posted by: ShaJ | 01/5/10 | 6:16 pm

And No D. U. to pollute the Environment too. Go Air Force. God bless America.

- Posted by: esmoore5 | 01/5/10 | 6:22 pm

Killer drones of the future may get even smaller:

VIDEO: Future killer insects will find you, blow your head off:

<http://www.flightglobal.com/blogs/the-dewline/2009/12/video-future-killer-insects-wi.html>

- Posted by: ZoeBrain | 01/5/10 | 10:17 pm

I can see the Secret Service just loving this. Anyone bet that Al Qaeda can't make an improvised version from commercial components?

Anyone bet that some of these won't go missing from some stores, the way everything from rocket launchers to automatic weapons have done in the past?

Organised crime is going to love this technology. Hits on rivals...

We may just have seen the end of high-value targets giving speeches in open-air fora. Unless protected by mosquito nets, or something similar. Wind generators perhaps? The problem with light flying vehicles is they're very susceptible to wind gusts.

I can see some clay pigeon shooters becoming part of the presidential guard too.

- Posted by: BenCorp | 01/6/10 | 3:45 am

I can't see the Taliban (and Hamas, AQ etc.) having much trouble replicating this technology for 1/1000th of the price.

Que a few 10s of billion \$ worth of anti-DIY death drone countermeasures for every hummer and truck in the US army before long. No one is paying attention to Osama's self stated strategy of victory through the inducement of bankruptcy. Plan seems to be working perfectly so far.

## Comments (0)