

Downed US drone: How Iran caught the 'beast'

Iran's apparent capture of a largely intact RQ-170 Sentinel spy drone, which was reportedly monitoring Iran's nuclear program, is a significant loss for the US.



Sepahnews/AP

This photo released on Dec. 8, by the Iranian Revolutionary Guards, claims to show the chief of the aerospace division of Iran's Revolutionary Guards, Gen. Amir Ali Hajizadeh (l.) listening to an unidentified colonel as he points to US RQ-170 Sentinel drone.

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By **Scott Peterson**, Staff writer

Iran is pushing the propaganda advantage after showing it captured an intact US stealth drone on a spying mission 140 miles inside Iran.

Hours after Iran state TV displayed the cream-colored American bat-wing RQ-170 "Sentinel" drone – its undercarriage hidden by banners of a US flag, with stars replaced by skulls and marked with anti-US slogans – Iranian officials said the spy craft was proof of enduring US hostility toward Iran.

"Iran will target all US military bases around the world," in case of further violations, warned conservative lawmaker Mohammad Kossari today. Iran's response would be "terrifying."

US officials confirmed with "high confidence" that the drone displayed by Iran is almost certainly the one reported lost last by US forces in Afghanistan last week. It was on an intelligence mission to hunt evidence in Iran of nuclear weapons work.

Despite those and other intelligence-gathering efforts – which are reported to include even surreptitiously installing radiation detectors at suspect sites in Tehran – the drone flights have apparently not yielded new evidence that would change conclusions by the United States and the United Nations that Iran stopped systematic nuclear weapons-related work in 2003.

Loss of the stealth drone is "very significant," says Robert Densmore, a defense journalist and former US Navy electronic countermeasures officer contacted in London.

"These Sentinels are pretty rare technology still, and to have one in such good condition, to be lost to a potential adversary like this, is pretty significant, especially because Iran has open ties to Russia and has been courted by China," says Mr. Densmore.

US loss

"Strategically, the US will suffer from the loss of this because ... it has radar, a fuselage, and coating that makes it low-observable, and the electronics inside are also very high-tech," says Densmore. "Diplomatically, Iran is really looking for a way to save some face," after the expulsion of Iranian diplomats from London, and increased scrutiny of its nuclear program, adds Densmore. "They are really looking for something to say to the world, to change public opinion, to say, 'Look, we're really the victims here.'"

Iran officially complained to the UN Security Council for the "blatant and provocative" violation of its airspace, and demanded "condemnation of such aggressive acts."

State-run PressTV said that international law made the clandestine US flights over Iran an "act of war."

Iran's Islamic Revolutionary Guard Corps (IRGC) said it had tracked and brought down the plane. After crossing into Iran, "this aircraft fell into the trap of our armed forces and was downed," said IRGC aerospace chief Brig. Gen. Amir Ali Hajizadeh. "Military experts are well aware how precious the technological information of this drone is," said General Hajizadeh.

Officials from Russia and China – which have close trade ties with Iran, and oppose Western efforts to increase pressure – "have asked for permission to inspect the US spy drone," Iranian media reported.

How Iran got the 'beast'

Nicknamed the "Beast of Kandahar" after it was first spotted in 2009 on an airport runway in Kandahar, Afghanistan, the drone was used to monitor Osama bin Laden's compound in Pakistan, undetected, before the raid to kill the Al Qaeda leader.

The Iranian video shows Hajizadeh and another Guard officer examining the craft with its radar-evading curves and wingspan which resembles the larger B-2 stealth bomber. It was placed on a platform with banners hiding the undercarriage and landing gear. The banners – fixed to either wing with clear packing tape – read: "The US can't mess with us," and "We'll crush America underfoot."

It was not clear how Iran acquired the drone intact. Some US experts dismiss the possibility that Iran could hack and then takeover the drone's controls, as Iran claims. And yet similar disruptions have proven possible in other battlefields, notably with the Iran-backed Hezbollah militia in Lebanon and drones from Israel.

"Those jamming capabilities exist, and a lot of them are not as new as we would like to imagine," says former US Navy electronics warfare officer Densmore.

"Anything that has a sensor, that takes communications links – as does the RQ-170, which has two, one for the satellite, and the other is line-of-sight with the ground control station – all it takes is disrupting that," says Densmore.

Often flying at 50,000-foot altitude, the RQ-170 would have had a hard landing, some say. And yet the Iranian video shows little visible damage, except that wings appear to have been reattached, and there was a small dent on the front edge of the left wing.

A senior US military source "with intimate knowledge of the Sentinel drone" was paraphrased by Fox News days ago as saying that the lost craft was "presumed to be intact since it is programmed to fly level and find a place to land, rather than crashing."

"This is a big prize in terms of technology," the source told Fox.

\$6 million drone

The unmanned \$6 million stealth drone is made by Lockheed Martin's Advanced Development Programs. It is the third high-profile loss of stealth technology: the first when a US F-117 jet fighter was shot down during the Kosovo conflict in 1999; the second when a stealth helicopter was damaged and largely destroyed *in situ* during the Bin Laden raid in Pakistan.

But this drone is not the most sophisticated stealth technology in the US arsenal, according to the website AviationIntel.com.

The RQ-170 was "most likely constructed with expendability in mind," and so had "dumbed-down stealth characteristics" that would mean the US military's "most sensitive stealth secrets" would not be compromised, the site says.

AviationIntel also says Iran recently received from Russia an advanced mobile jamming and intelligence system called "Avtobaza" that could have detected the drone and perhaps jammed its communications links.

"There is no reason why [that] system could not have detected the Sentinel's electronic trail and either jammed it and/or have alerted fighter aircraft and SAM [surface-to-air missile] installations as to its whereabouts," said AviationIntel on its site. "Further, these systems are supposed to be used in direct conjunction with Iran's nuclear development sites."

While the drone could have operated with limited electronic connectivity, making it less visible, AviationIntel indicates, a "more likely scenario" would be one of "actively transmitting live video, detailed radar maps, or electronic intelligence, in real-time," making detection easier by the Russian-made system.

Iranian officials said that this is not the first drone to be shot down in the region. Last January, Hazijadeh told an IRGC publication that Iran had "shot down a large number of their highly advanced spy planes." They were brought down outside Iranian airspace, and Iran "invited Russian experts" to see two of them," and later reproduced them through reverse engineering," reported the Fars News Agency, which is linked to the IRGC.

Iranian ability

Iran's own technical capacity is unknown. The country has excelled in some fields like nanotechnology, and stem-cell research, and created a sophisticated nuclear program that includes 8,000 centrifuges for enriching uranium – despite an array of sanctions.

But there are also limits, as evidenced by the launch of Iran's first Omid (Hope) satellite in 2009. While that event put Iran into an elite scientific club of just nine nations, the innards of the satellite appeared to be rudimentary.

State TV showed footage at the time of the satellite being assembled into a square silver box, its guts similar to those of a 1950s transistor radio, with D-size batteries and wires held in place with black electrical tape. Iran has also frequently made claims about advanced military systems that later proved exaggerated.

Aerial surveillance inside Iran is not new, according to a Washington Post report from early 2005 noted by the EAWorldview website. US officials said US drones were at the time "penetrating Iranian airspace" from bases in Iraq, using "radar, video, still photography and air filters designed to pick up traces of nuclear activity," the Post reported.

"We've always relied on [drones] as a force multiplier, a technological edge that we've had, and we've always known it wouldn't be a permanent advantage," says Densmore. Opponents "are expecting us now to deploy these things, they're looking for them, so a lot of that advantage has been lost."

(The original version of this story incorrectly attributed authorship. The piece was written by staff writer Scott Peterson.)

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