

Drones will be put to work this hurricane season

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Joe Cione, who studies how storms interact with the ocean at the National Oceanic and Atmospheric Administration's Hurricane Research Division in Miami, displays a drone he hopes to use this hurricane season for research. AP Photo/J Pat Carter

ORLANDO, Fla. — A bunch of Coyotes will be let loose in hurricanes this year. Their mission: to improve our understanding of hurricanes.

These coyotes aren't the four-legged kind, however. They are small pilotless planes called [drones](https://www.newsela.com/?tag=drone) (<https://www.newsela.com/?tag=drone>). The Coyotes were developed after Hurricane Sandy. This hurricane season will be the first time they've been tested.

The tiny planes will be launched into the eye, or center, of hurricanes. Their main purpose will be to spot changes in air pressure.

What they find will be very useful to the National Hurricane Center. It will help determine how strong a storm could become. Hurricane season runs from June to November in the Atlantic Ocean.

Cool, New Technology

Coyotes are exciting news, says Jason Dunion. He works for the National Oceanic and Atmospheric Administration (NOAA).

Coyotes weigh about 7 pounds. The planes are 5 feet long from the end of one wing to the end of the other. Coyotes can fly at speeds of up to 70 miles per hour.

The tiny drones will be dropped out of hurricane hunter planes. They will be launched from 10,000 to 12,000 feet above the ocean.

Coyotes will do what no other planes can: spend up to two hours circling around the center of a hurricane. They will send forecasters detailed information about what's happening inside a hurricane.

The approach is new and very promising, Dunion said. What's going on inside a hurricane's eye should now be much clearer.

Scientists Are Eager For The Data

Coyotes also will be flown into a hurricane's eye wall. The eye is the calmest part of the storm. But, the eye wall is the most dangerous part. It's the ring of clouds around the eye. It is the area with the heaviest rain and strongest winds. The goal will be to find the speed of the strongest winds. That information should help the National Hurricane Center improve its predictions. It will help show just how strong a hurricane will become.

Additionally, Coyotes will provide clues about something particularly important: Just when a hurricane might quickly increase in strength. Fast increases can be dangerous if the hurricane is near land.

Coyotes cost about \$70,000 each. For a single storm, two or three might be used. Yet, there's little chance they would make it back.

Dunion said the benefits will be worth it. He said the small plane can fly right above the ocean surface in a storm's eye. Getting that close is far too dangerous for any plane with people aboard.

The Coyote's ability to fly close to the ocean is particularly useful. It will help scientists better understand something important: How a hurricane gets power from the heat of the ocean's surface.

The temperature "of the ocean near a storm's eye is not something we sample very often," Dunion said. "It's hard to sample."

They're Different And They're Ready

NOAA plans to station Coyotes in the U.S. Virgin Islands. It will be studying storms that could hit the United States this summer.

The Coyote is not the first drone to be flown straight into a hurricane. In 2005, a small drone called an aerosonde was flown into Hurricane Ophelia. However, that plane had to launch from land.

Coyotes, though, are different: They will be launched from a hurricane hunter plane already in a storm. That way, they will be able to collect more information.

“This is just over-the-top technology,” said Erica Rule of NOAA.