

The robber fly is a powerfully built, bristly fly with a short, stout proboscis enclosing the sharp, sucking hypopharynx. The name “robber fly” reflects its notoriously aggressive predatory habits; it feeds mainly or exclusively on other insects and as a rule it waits in ambush and catches its prey in flight.



The Asilidae are the robber fly family, also called assassin flies

A BBC News [article](#) published on March 9, 2017, entitled “Robber fly: Hunting secrets of a tiny predator revealed,” reports that the mid-air hunting strategy of the robber fly has been revealed by an international team of scientists.

## Robber fly: Hunting secrets of a tiny predator revealed

*The mid-air hunting strategy of a **tiny fly the size of a grain of rice** has been revealed by an international team of scientists.*

*Holcocephala, a species of robber fly, is **able to intercept and “lock on” to its prey in less than a second.***

*Researchers used high-speed cameras to show exactly how the fly positioned itself to capture a moving target in mid-air.*

*The results are published in the journal Current Biology.*

*Paloma Gonzalez-Bellido from Cambridge University explained that, normally, “when we think of hunting animals we think of excellent vision and speed, but when you’re so very tiny, you have a very small brain and limited sensory capacity”.*

She added: **“We wanted to know how [this fly manages] this predatory behaviour.”**

Dr Gonzalez-Bellido and her colleagues created a miniature outdoor studio – filming the fly from two angles to capture its movement in 3D.

They discovered that the fly maintained what they described as a “constant bearing angle” – keeping its prey in the centre of its field of vision.

PhD student Sam Fabian explained: “They’re not sticking to a trajectory; if the target changes direction, they compensate, so this is reactive.”

In doing this, the insects are essentially using a very old navigation rule employed by sailors, Dr Gonzalez-Bellido explained.

“If another vessel is not moving within your field of view, and it’s getting bigger and closer, you’re on a collision course,” she said.

The team also studied the fly’s eyes, revealing that part of its hunting secret was contained in **its highly adapted vision. Larger lenses and a high density of extremely tiny sensors at the centre of its eyes** allow it to **see its prey from a distance** and to **accurately “lock on” as it approaches.**

“This gives this fly **a resolution** in this area **that’s the same as much larger dragonflies,**” explained Dr Gonzalez-Bellido. “It’s an extreme adaptation.

*The next step for scientists is to **find out exactly how Holcocephala's brain takes this visual information and turns it into a stealth hunting manoeuvre in the blink of an eye.***

## “Highly adapted?”

This tiny fly, “the size of a grain of rice,” is much more complex than a jet plane and a helicopter rolled into one! Jet planes and helicopters are designed, yet this much more complex flyer was not?

*“How many are your works, Lord!  
In wisdom you made them all;  
the earth is full of your creatures.”  
(Psalm 104:24 NIV)*

The “wisdom” of God that designed this tiny creature and billions of others is beyond the scope of human knowledge. Yet they want “to find out how it works!”

*“I know every bird in the mountains,  
and the insects in the fields are mine.”  
(Psalm 50:11 NIV)*

Better yet, humans would profit much more by finding out who this designer of “insects” such as Holocephala is.

Sources:

- <http://www.bbc.com/news/science-environment-39219015>
- <https://en.wikipedia.org/wiki/Asilidae>