

How do fireflies talk to each other?

As you saw in your backyard, many fireflies use **light** to communicate.



Light is a **signal**:

A firefly emits a flash or glow to **send** a message, which is **received** by their mate

> During the **light displays** at twilight or night, fireflies **signal** to each other.

Each firefly species emits a unique color of light between **green** to yellow or even orange!

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Species active at **night** have *greener* light while those at **twilight** have *yellower* light!







Light color helps fireflies detect light signals from their mates. '\`

The first fireflies had **green** light and were active at **night**.



To **escape predators** at night, some fireflies began flashing **earlier, at twilight**.

How does sunlight affect the visibility of green signals?



Green firefly light signals **blend in** with trees, bushes and grass, so they're hard to see.





To see signals better against a green background, twilight fireflies evolved **yellow & orange light!**



, I, Some fireflies come out during the **day**.

Sunlight **hides light signals** so there is no need for light organs.



Day-active fireflies found another way to communicate with their mates:



Pheromones travel by **air**, sensed by mates using **large antennas.**



Day-active fireflies emit perfumes (called **pheromones**) instead of light!



Long, thick, or branched antennas capture perfumes like a **net!** References 🛟 👘

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Ongoing research at UGA!

We're learning more about firefly communication at UGA! Check out the Firefly Lab led by Dr. Kathrin Stanger-Hall.



https://research.franklin.uga.edu/stanger-hall/