

Birds migrate, Butterflies migrate, and **Dragonflies migrate!** They all make epic journeys of thousands of miles. You'd think delicate creatures like these would be blown to bits by strong winds and storms.



Common Green Darner - Photo credit: Mark Chappell

The common green darner, found all across North America, takes three generations to complete its annual life cycle. (We remember that Monarch butterflies need four generations for their annual lifecycle.) The Green darner has a wingspan of about three inches, but it migrates over 373 miles with some of them flying over 1,553 miles! “Dragonflies can fly forward at about 100 body-lengths per second, and backwards at about 3 body-lengths per second. They are also capable of hovering in the air for about a minute.”(1)

“There are massive insect declines going on around the world,” said Peter Marra, head of the Smithsonian Migratory Bird Center... “So, understanding these complex biological patterns is essential to determine why different populations might be declining.”

Please see: ***Smithsonian Scientists Unlock the Mystery of Dragonfly Migration***, for more fascinating information.

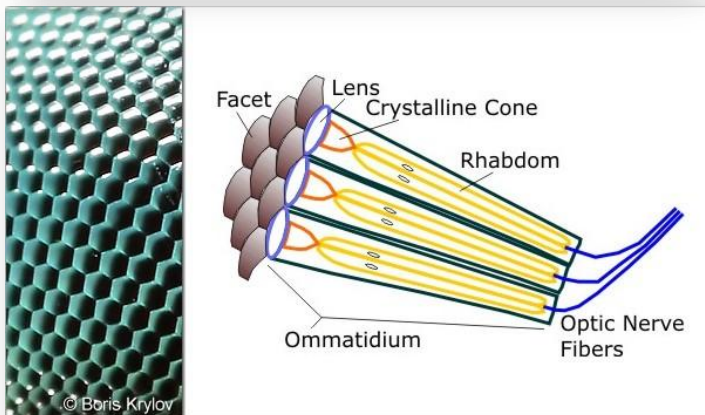
<https://nationalzoo.si.edu/news/smithsonian-scientists-unlock-mystery-dragonfly-migration>



(1) <https://ucmp.berkeley.edu/arthropoda/uniramia/odonatoida.html>

A word about **Dragonfly Eyes**

They have very large “compound” eyes, which means they have thousands of tiny lenses that make up each eye. These tiny lenses are part of the “ommatidia” that allow the dragonfly to see in all directions – front, sides, and in back! There are about 28,000 individual ommatidium and together the two eyes cover most of the dragonfly’s head. More than 80% of their brain is devoted to analyzing visual information. (2)



Compound eye diagram: http://www.naturenorth.com/dragonfly/DOM/popup_08_3.html

Dragonfly eye photo 1: <https://www.nationalgeographic.com/animals/invertebrates/d/dragonflies-insects/>

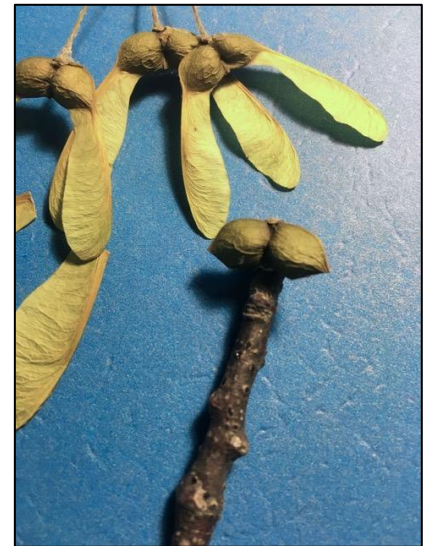
Dragonfly eye photo 2: <https://www.countrylife.co.uk/nature/hexagon-abounds-in-the-natural-world-153183>

(2) <https://ucmp.berkeley.edu/arthropoda/uniramia/odonatoida.html>

Let's get creative and celebrate these beautiful and fascinating creatures by going outdoors to find our craft materials from our tree friends and make

Twig Dragonflies!

If you've got Maple trees in your yard or neighborhood, you may have noticed that they are sending their seeds out at this time. Some people call them *helicopters*, *whirligigs*, *twisters*, or *keys*. The formal term for this winged seed is, "samara". I used dry Norway maple seeds for wings, dry Sugar maple seeds for the eyes, and Red oak tree twigs for the body. Simple glue is all you need. Paints if you have them.



Mrs. J highly recommends watching this **15-minute video** produced by **National Geographic**, on the lifecycle of the Dragonfly:

<https://www.nationalgeographic.com/animals/invertebrates/d/dragonflies-insects/>