

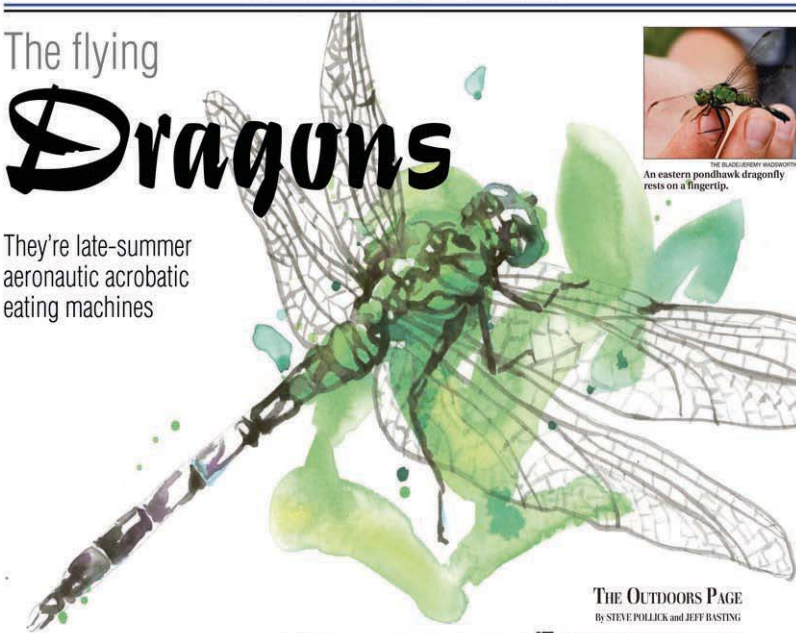
TOLEDO MAGAZINE

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SECTION B, PAGE 6

The flying Dragons

They're late-summer aeronautic acrobatic eating machines



An eastern pondhawk dragonfly rests on a fingertip.



Dragonfly eyes contain up to 30,000 individual facets; human eyes have only one lens. Dragonflies have to position their eyes by moving their bodies because their eyes don't move. In proportion to body size, the eyes are larger than those of any other animal.

PHOTO COURTESY COVIL

Dragonfly facts

- Dragonflies flew about 100 million years before dinosaurs were on earth.
- Some dragonflies from the Carboniferous Period 300 million years ago had wingspans of more than 2 feet. The largest dragonflies today have wingspans of just 7 inches.
- There are more than 5,000 species of dragonflies worldwide.
- They can change direction in an instant and can hover like helicopters in mid-air, and dart up, down, and even backward.
- Dragonflies are one of the fastest flying insects, reaching more than 30 mph.
- The dragonfly has two sets of wings; the front wings can be going up while the back ones are going down. When at rest, the dragonfly cannot fold its wings back like its cousin the damselfly can. They flap their wings about 30 beats per second.
- While flying, the dragonfly positions its legs and bristly spines growing on the legs to form a basket scoop. It collects mosquitoes and other bugs in this basket and then eats them on the fly.



THE BLACK/STEVIE WADZINSKY



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Top: A widow skimmer rests atop a bloom of Queen Anne's Lace. Above: A hand-winged meadowhawk alights on a stem of grass.

THE OUTDOORS PAGE

BY STEVE POLLOCK and JEFF BASTING

It is the season for the mosquito hawk, blood thief. That is the evocative nickname that some naturalists apply to dragonflies and damselflies. It is especially heard on field trips with youngsters, whose active imaginations thus may be turned on to these marvelous masters of the air.

The moniker fits to a T, too, for these hawklike creatures are insect-eaters of the first order, and death to mosquitoes and the like. Nothing on earth flies like the members of this family, a 300-million-year-old "old order" of insects known as *Odonata*. By comparison, birds and butterflies are leaders.

Equipped with two sets of heavily veined, transparent wings, dragonflies and damselflies can burst to 30 mph or more — forward, backward, up, down, virtually in any global direction, in a split second. The wing pairs usually beat out of sequence, and each wing can be moved independently, which allows for the extreme maneuvers.

The famed aviation pioneer Igor Sikorsky was so taken with their aerial abilities that he named one of his helicopters the Dragonfly. Complementing an odonate's single paired wings is a set of large, compound eyes that afford nearly 360-degree vision. Human eyes have only one lens.

"They see you coming, you have to be quick," noted Linda Rose, a naturalist with the Sandusky County Park District. She was telling a group of youngsters about those amazing eyes while advising on tactics for netting dragonflies and damselflies for up-close study.

Dragonflies and damselflies are in their glory in August and September. "Some of them fly clear through the end of October, depending on the weather," said Mrs. Rose. These winged predators also eat flies, bees, gnats, and more. Some of the larger dragonflies, such as the dragonhunter, may take prey as large as the tiger swallowtail butterfly, or even other dragonflies.

Ohio's present-day dragonflies and damselflies carry an average wingspan of one to two inches, but fossil remains confirm that ancestral odonates stretched as much as two feet or more. So you can imagine the size of the ancestral mosquitoes, or whatever, that were buzzing about in the days of the dinosaurs.

While both share large heads, slender, elongated bodies, and the two pairs of wings, dragonflies are huskier of body than damselflies and tend to rise from places that are considered common, but you never know when a rare species may turn up.

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The naturalist also noted the grand variety of eye-catching colors and jewel-like patterns that delineate the various odonates — metallic greens and blues, bronzes, and reds among them. "You can get them in just about any color."

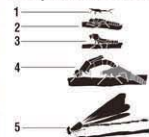
The Ohio Division of Wildlife produces an excellent field guide, *The Dragonflies and Damselflies of Ohio*, which will help them out. Call 1-800-4WD-LIFE, option 2, and ask Publication 526.

Contact Steve Pollock at: spollock@theblade.com or 419-724-6068.



A 12-spotted skimmer dragonfly grasps a plant stalk along a wetland pond.

Life cycle of a damselfly



1. The damselfly life cycle includes the three cycles — egg, nymph, and adult. After the egg hatches, the nymph lives underwater and feeds.
2. When the nymph is ready to become an adult it crawls out of the water and attaches itself to a plant stem.
3. The back shell splits.
4. The adult continues to emerge, breaking the shell on its back so the head and thorax can come out.
5. The adult pumps blood into the crumpled wings after emerging to unfold them. The young adult can fly within two hours. It takes a few days for the body colors on the skin to develop.

THE BLACK/STEVIE WADZINSKY



A common green damselfly, a damselfly, at rest with wings folded back.