

Introduction to Dragonfly & Damselfly Identification

By: Kyle Bailey



“Who is not fascinated by flying creatures?”

–*Jay Cossey*

What exactly is a dragonfly?

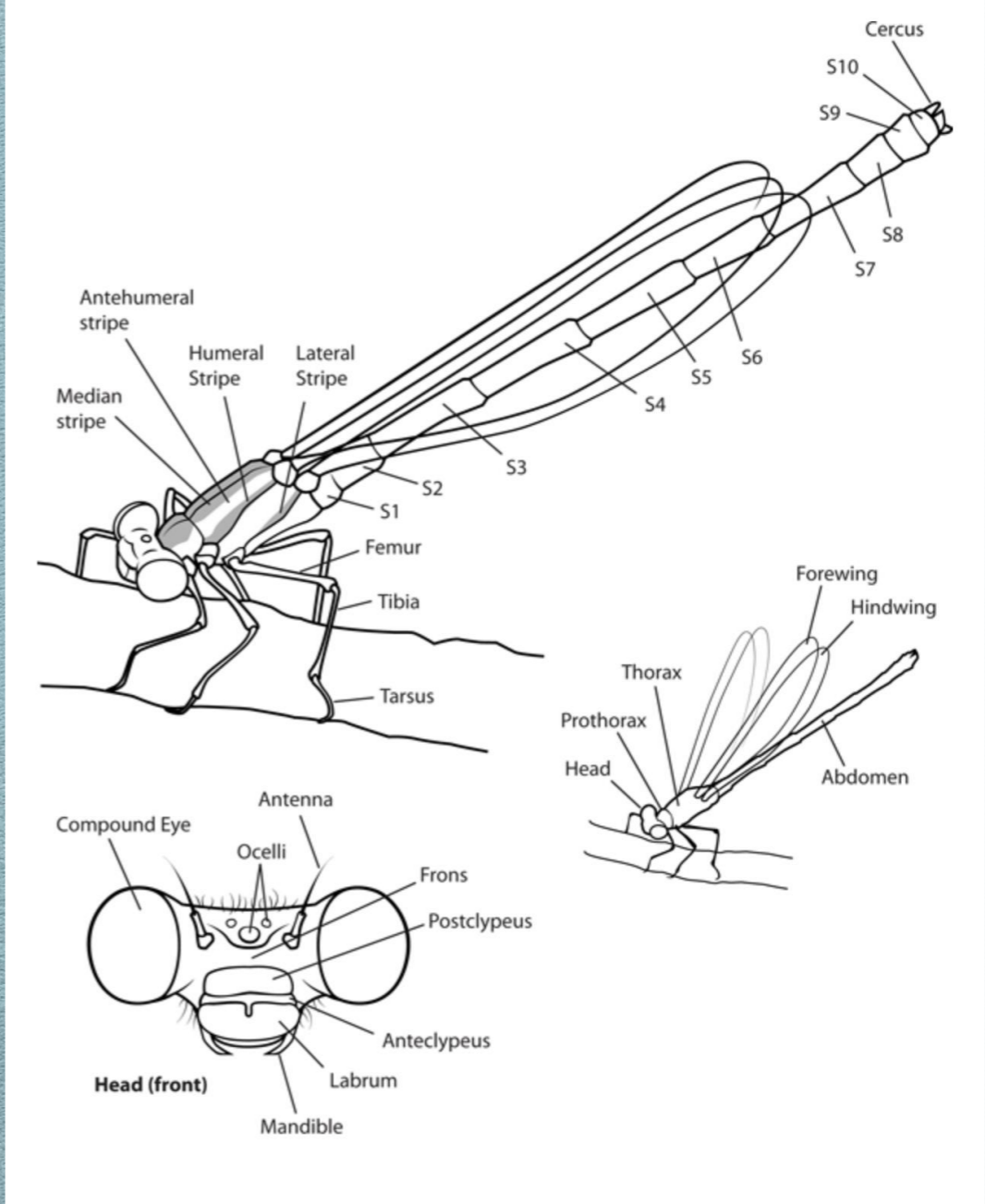
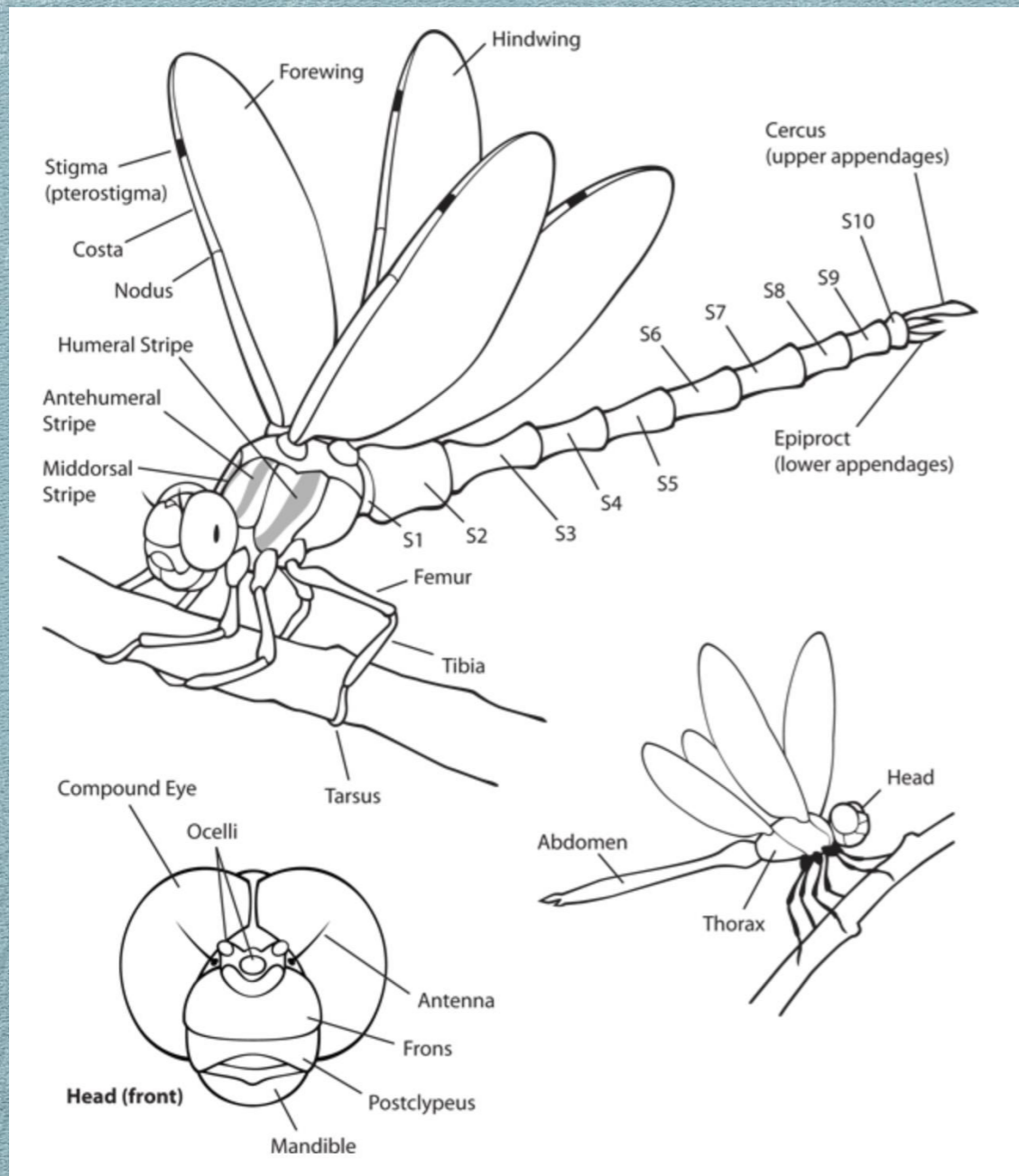
- ◆ Predatory flying insects; four wings
- ◆ Order Odonata
- ◆ Sub orders: Dragonflies (Anisoptera) & Damselflies (Zygoptera)



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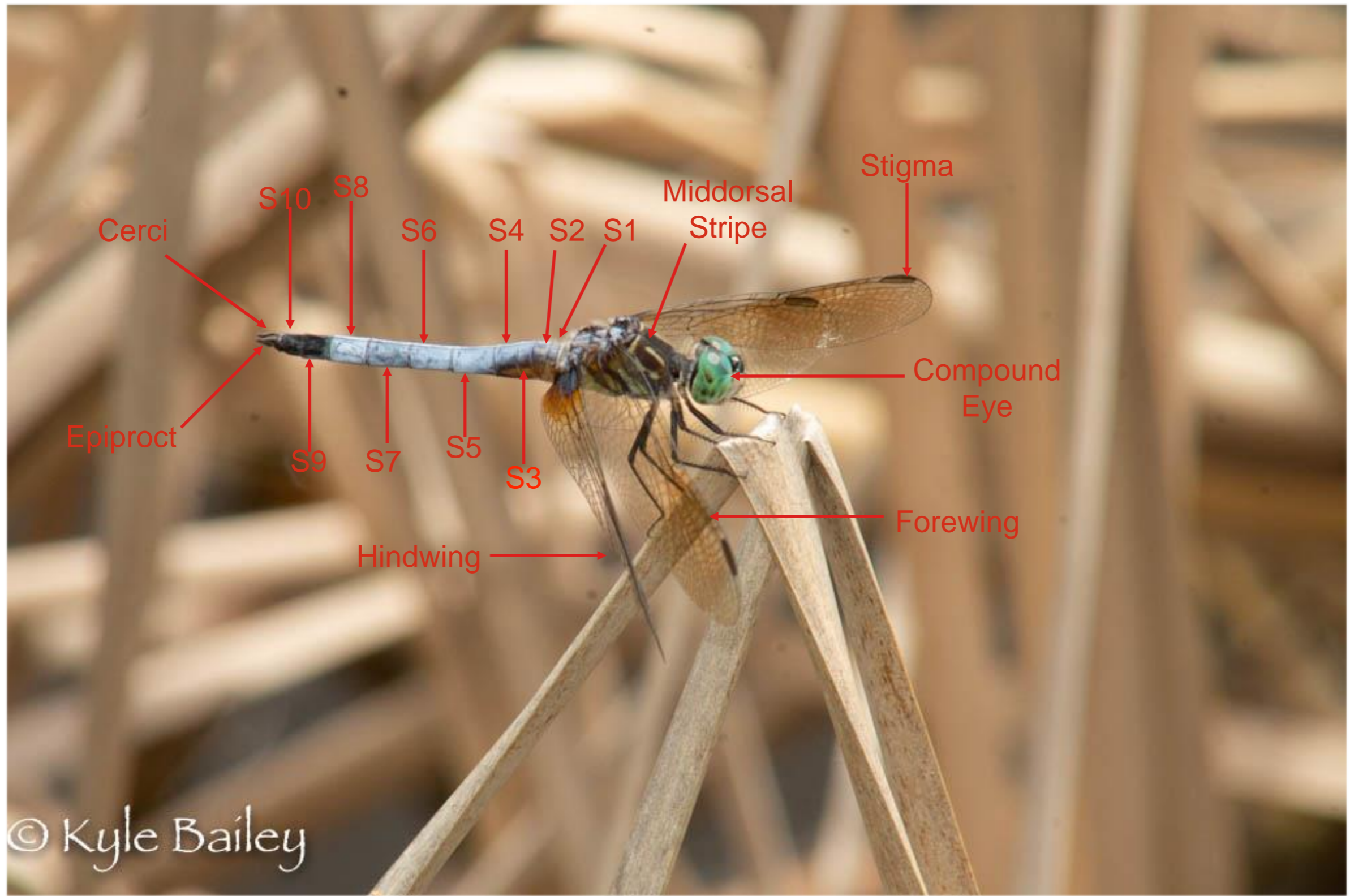


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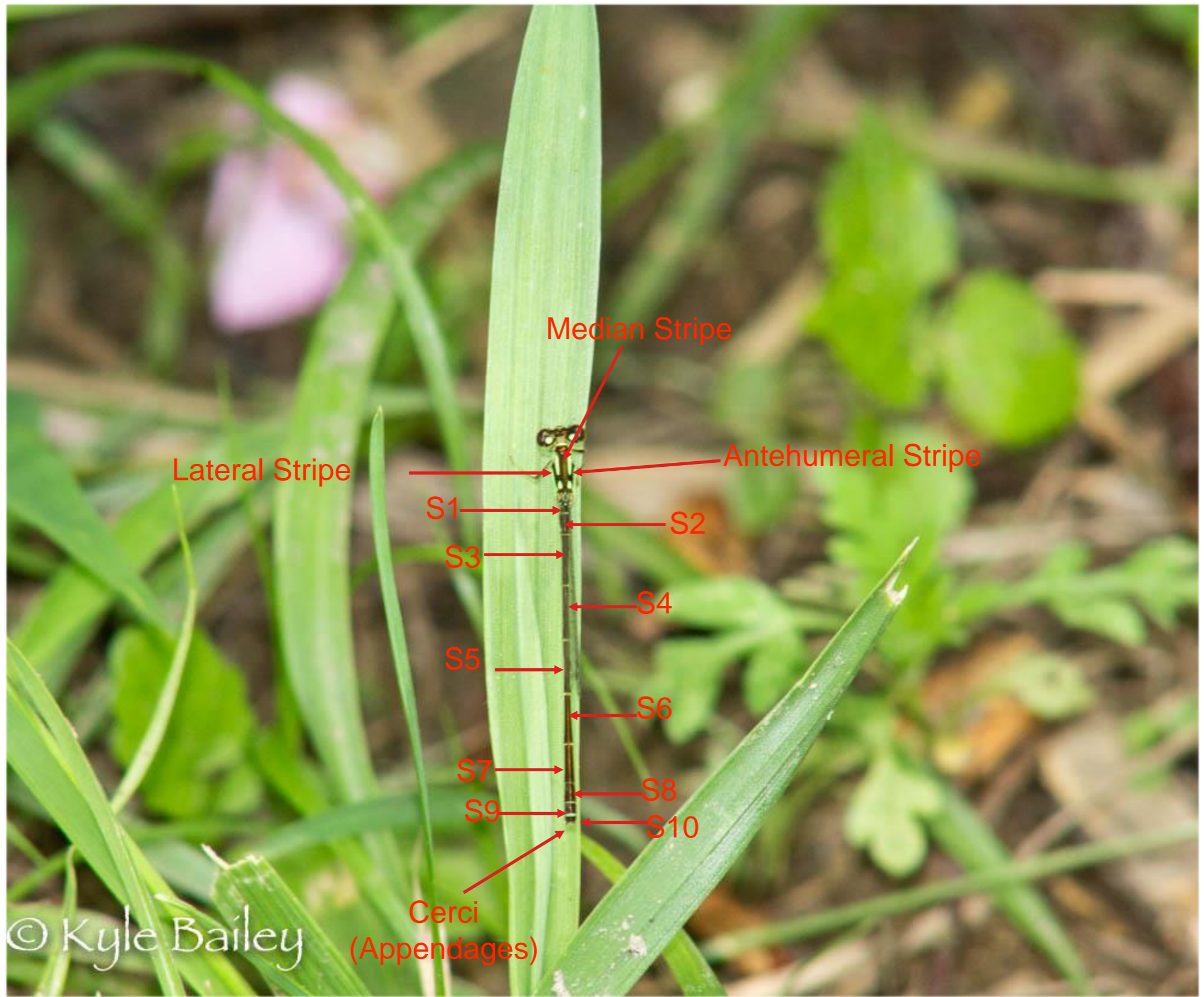
Dragonfly & Damselfly Anatomy

Dragonfly



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Natural History

- ◆ Fossil evidence as early as 300 million years ago carboniferous period
- ◆ Descendants of dragonflies with 6 ft. wing spans
- ◆ Odonous means “tooth”
- ◆ 6,000+ species in the world, 450+ found in North America, & 169 found in Ohio and counting



“Primitive in their evolutionary history but advanced in their biology”

Dennis Paulson

Reproductive Strategy

- ◆ Males set up and defend mating territories along ponds, rivers, or streams
- ◆ Courtship minimal
- ◆ Form mating wheel
- ◆ Oviposit





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Nymphs

- ◆ Can spend 7+ years as a nymph
- ◆ Incomplete metamorphosis
- ◆ Strong labium catches prey
- ◆ Sheds exuviae
- ◆ Teneral= freshly hatched



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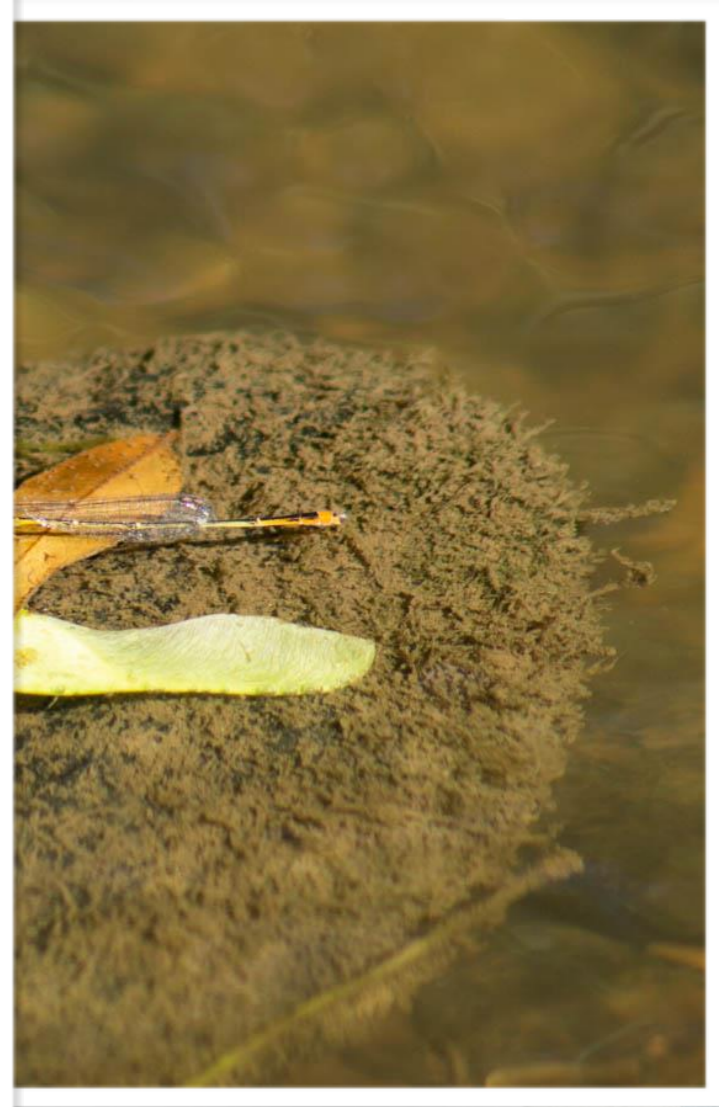
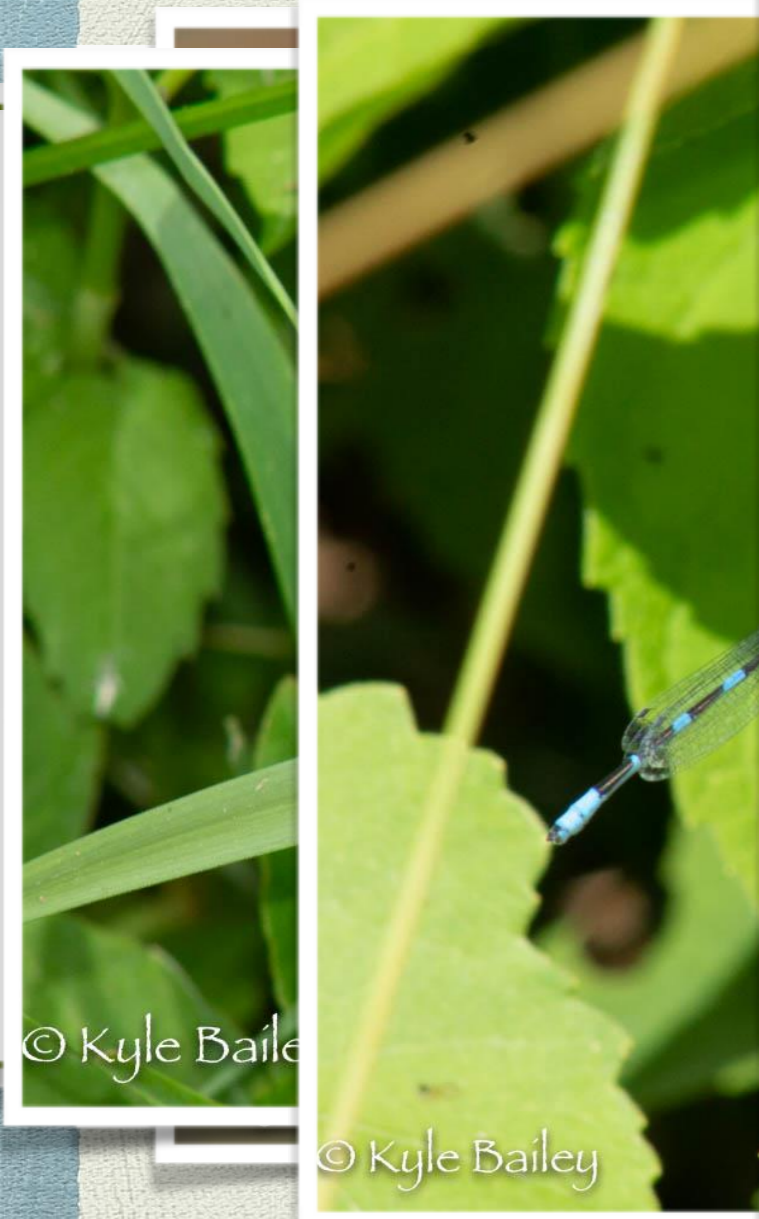


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Incredible Diversity



Sexual Dimorphism



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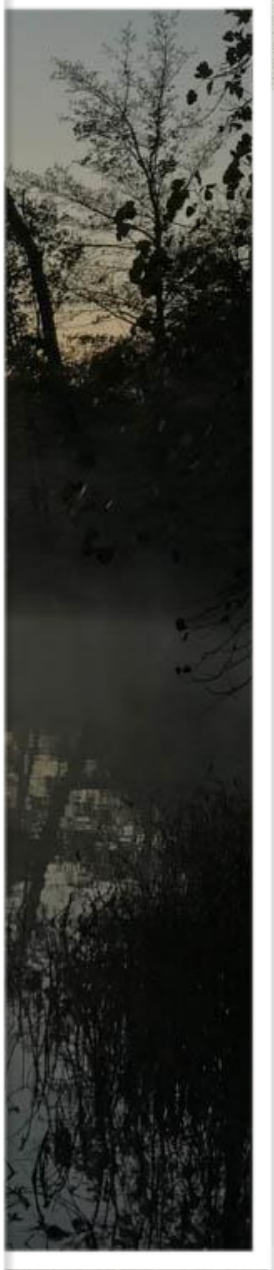


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Habitat



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Ferocious Predators



Food Chain



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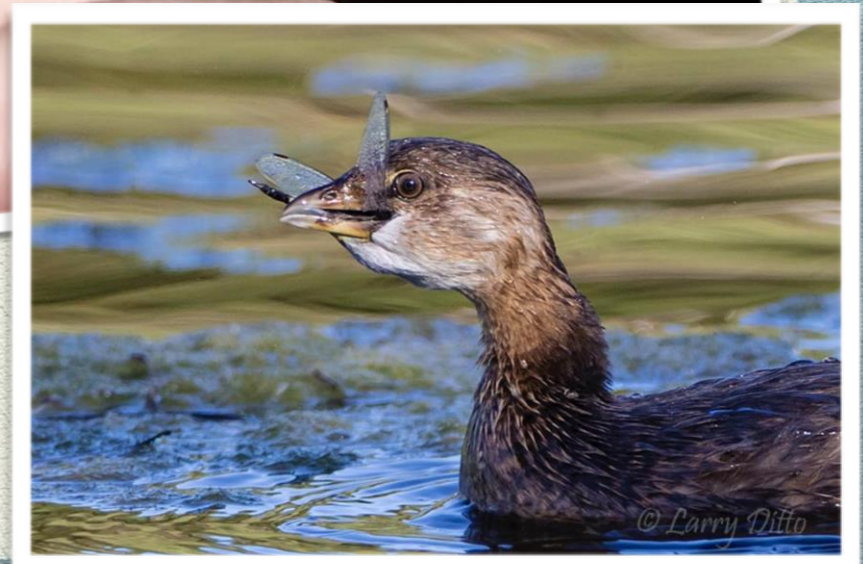
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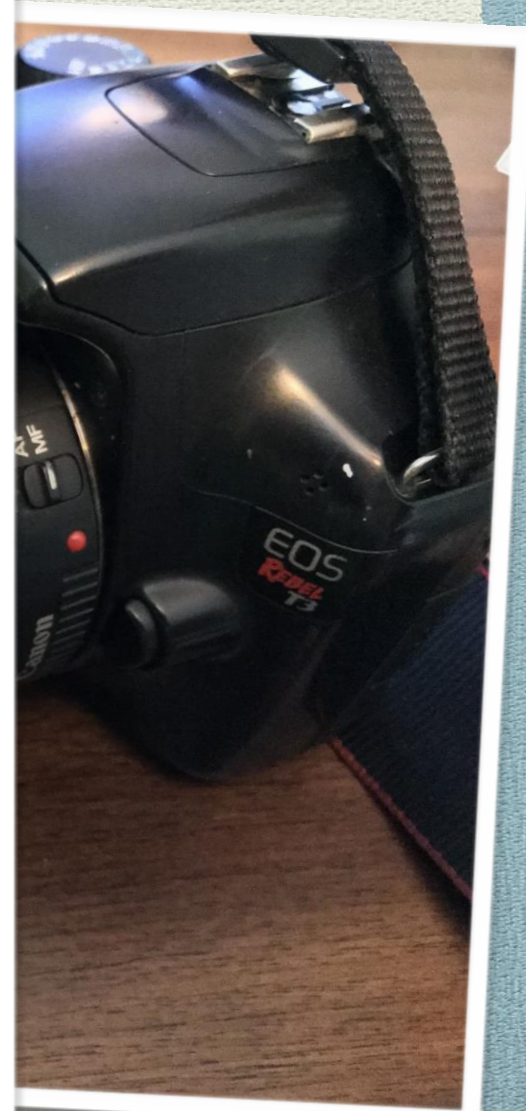
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What do I need to get the “itch”?

- ◆ Optics
- ◆ Net
- ◆ ID Guide





Kenneth J. Tennessen

Dragonfly Nymphs of North America

An Identification Guide

 Springer

Ohio Dragonfly (& Damselfly) Survey

- Identify every species for each county
- Spread knowledge of Odes
- Create an all of Ohio ID field guide



How to get involved!

- ◆ Photo submissions
- ◆ Physical collections



Photography Methodology

- Side Profile
- Top (dorsal) View
- Terminal appendages



u.osu.edu/ohioodonatasurvey/

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OHIO DRAGONFLY SURVEY

Check here for updates from the Ohio Dragonfly Survey



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ACROSS OHIO

Hello Ohio! *Sticky Post*

December 22, 2017 at 12:38pm by [MaLisa Spring](#)

The New Survey:

The Ohio Odonata Society is working with the Ohio Division of Wildlife to update the original survey that ran from 1991 – 2001. In this updated survey we will be utilizing both traditional collections of specimens and photographic records through [iNaturalist](#). The new survey will run from 2017 through 2019 and will culminate in a lay-person book on Ohio Dragonflies and Damselflies similar to the Ohio Bird Atlas.

Goals for the second survey of Ohio dragonflies and damselflies include:

- to identify every species known for each county.
- to identify species introduced/established in Ohio since the original survey.
- to determine changes in distribution and abundance, especially rare species

To participate, you can either photograph or collect specimens. No identification skills are required for photo observations and we accept observations from any date. Just take a photo and submit it to iNaturalist. Check out our [Photo Collections](#) and [Physical Collections Protocols](#) for more information.

If you are interested in meeting up with excited naturalists, check out [our upcoming events](#)



Damselflies- Zygoptera

- Lestidae - Spreadwing Damsels
- Calopterygidae - Broad-winged Damsels
- Coenagrionidae- Pond Damsels



Dusky Dancer

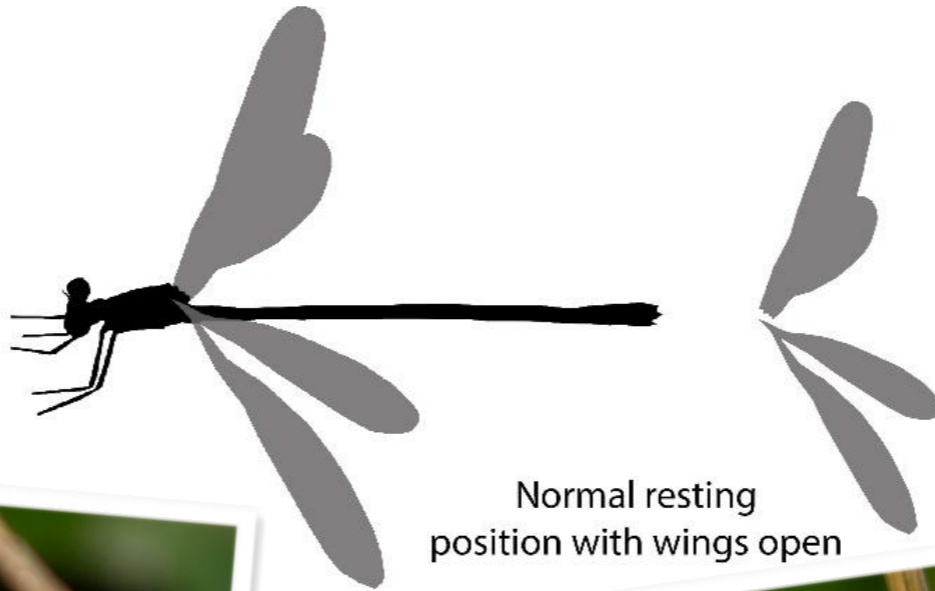
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Lestidae- Spreadwing Damsels

Spreadwing Damselflies: Family Lestidae

Pond Spreadwings (*Lestes* spp) - 10 species in Ohio
Great Spreadwing (*Archilestes grandis*)

Note narrow wing bases
& wing position



Normal resting
position with wings open

Find something cool?

- Submit photos to iNaturalist.org
- collect a specimen if you have landowner permission
- OR email spring.99@osu.edu

Learn more at:

u.osu.edu/ohiodonata



Slender Spreadwing

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Emerald Spreadwing

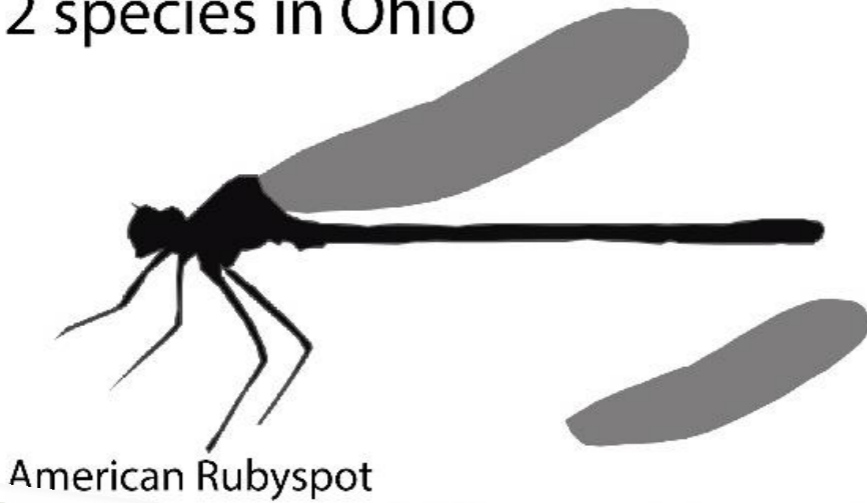
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Calopterygidae : Broad-winged Damselfs

Broad-winged Damselflies: Family Calopterygidae

Note broad wing bases

Rubyspots (*Hetaerina* spp)
2 species in Ohio



Jewelwings (*Calopteryx* spp)
3 species in Ohio



<http://beingbutmen.blogspot.com/2015/06/american-rubyspot-damselfly.html>

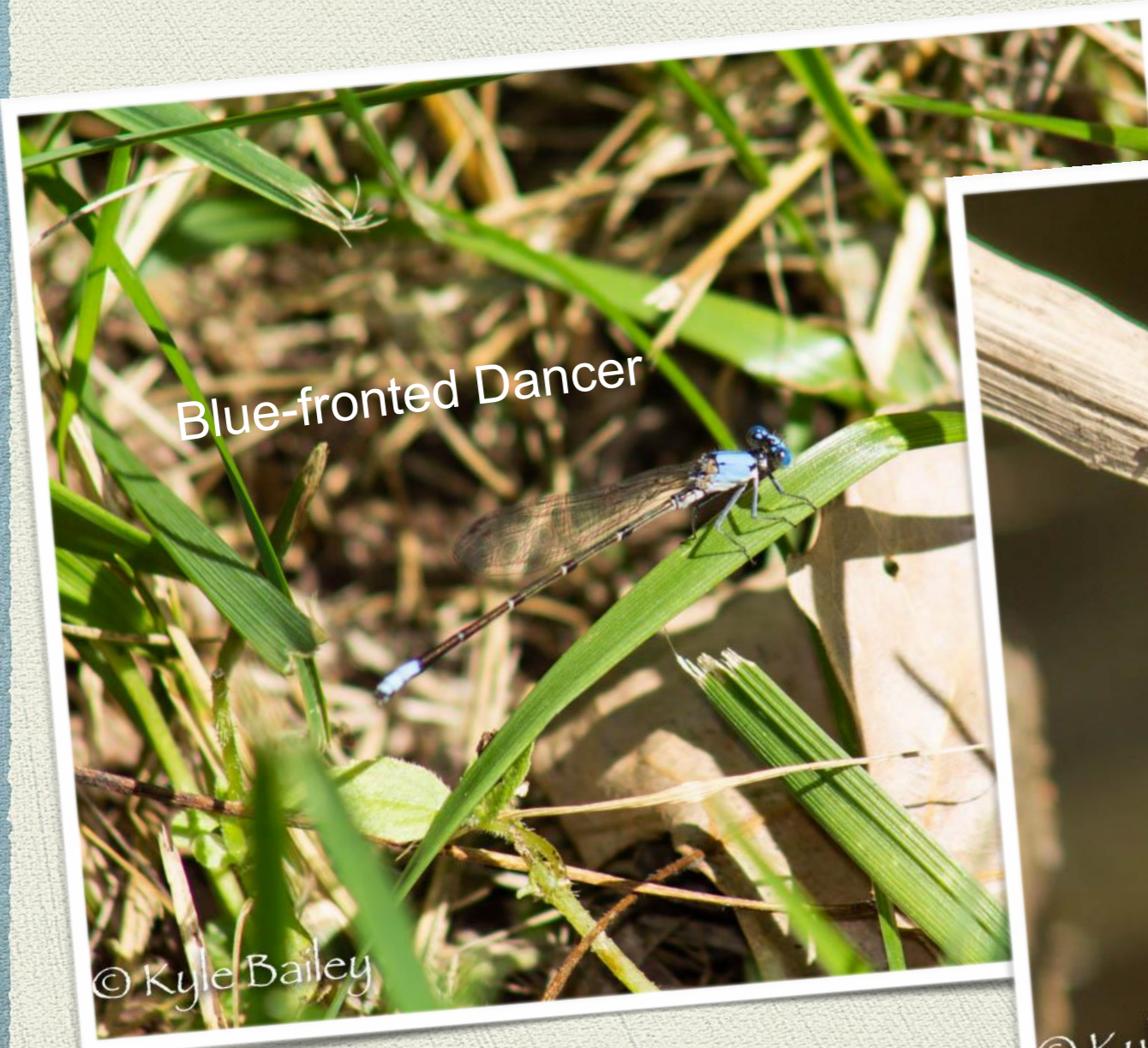


Coenagrionidae: Pond Damselflies

Dancers (*Argia* spp)
7 species in Ohio



Violet Dancer



Blue-fronted Dancer

© Kyle Bailey



Violet Dancer

© Kyle Bailey

Coenagrionidae: Pond Damselfs

Forktails (*Ischnura* spp)
6 species in Ohio



Citrine Forktail



Eastern Forktail

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Fragile Forktail

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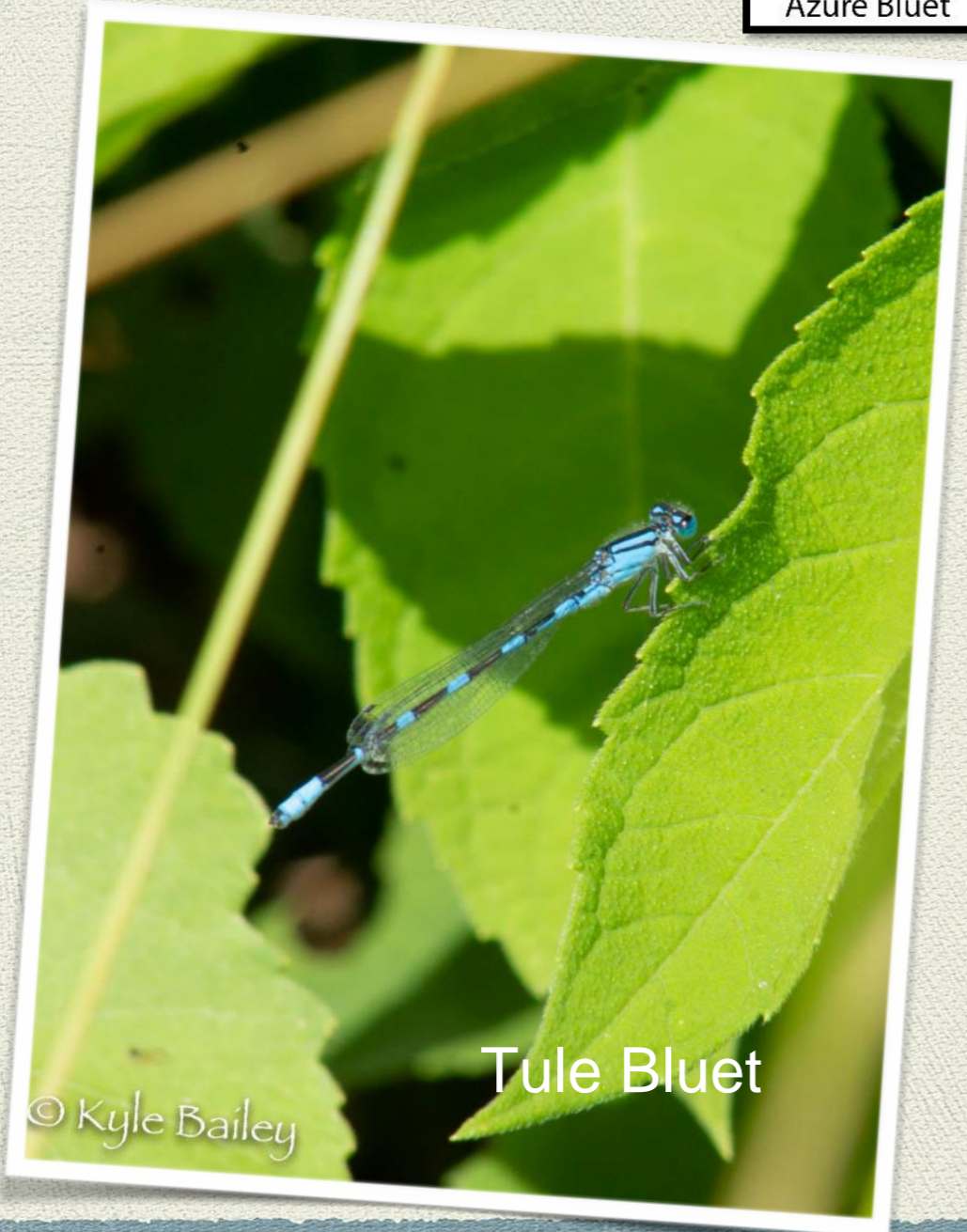
Coenagrionidae: Pond Damselfly

Bluets (*Enallagma* spp)
17 species in Ohio



Azure Bluet

We recommend photographing male terminal appendages to confirm identifications of Bluets and Spreadwings



Tule Bluet

© Kyle Bailey



Azure Bluet

© Kyle Bailey

Dragonflies- Anisoptera

- ◆ Petaluridae- Petaltails
- ◆ Aeshnidae- Darners
- ◆ Gomphidae- Clubtails
- ◆ Cordulegastridae- Spiketails
- ◆ Macromiidae- Cruisers
- ◆ Corduliidae- Emeralds
- ◆ Libellulidae- Skimmers

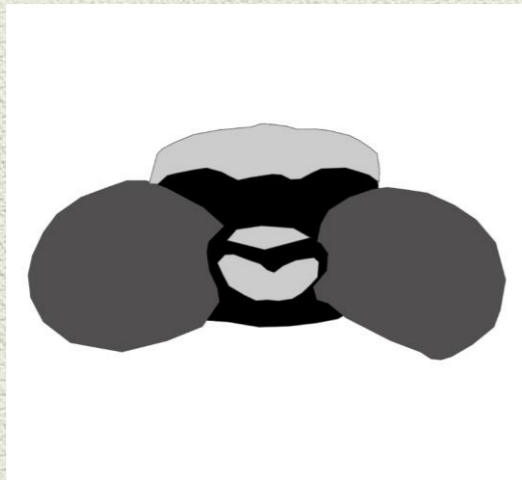


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Slaty Skimmer

Petaluridae: Petaltails

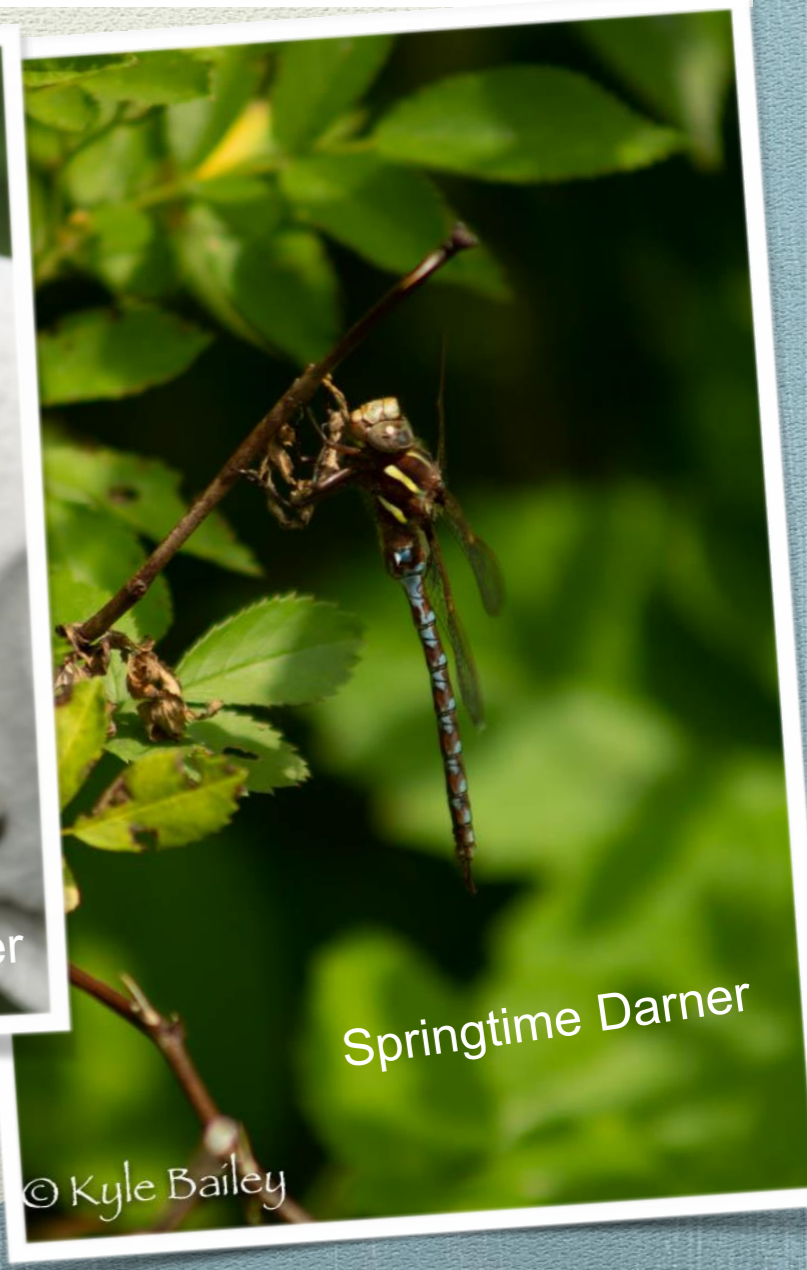
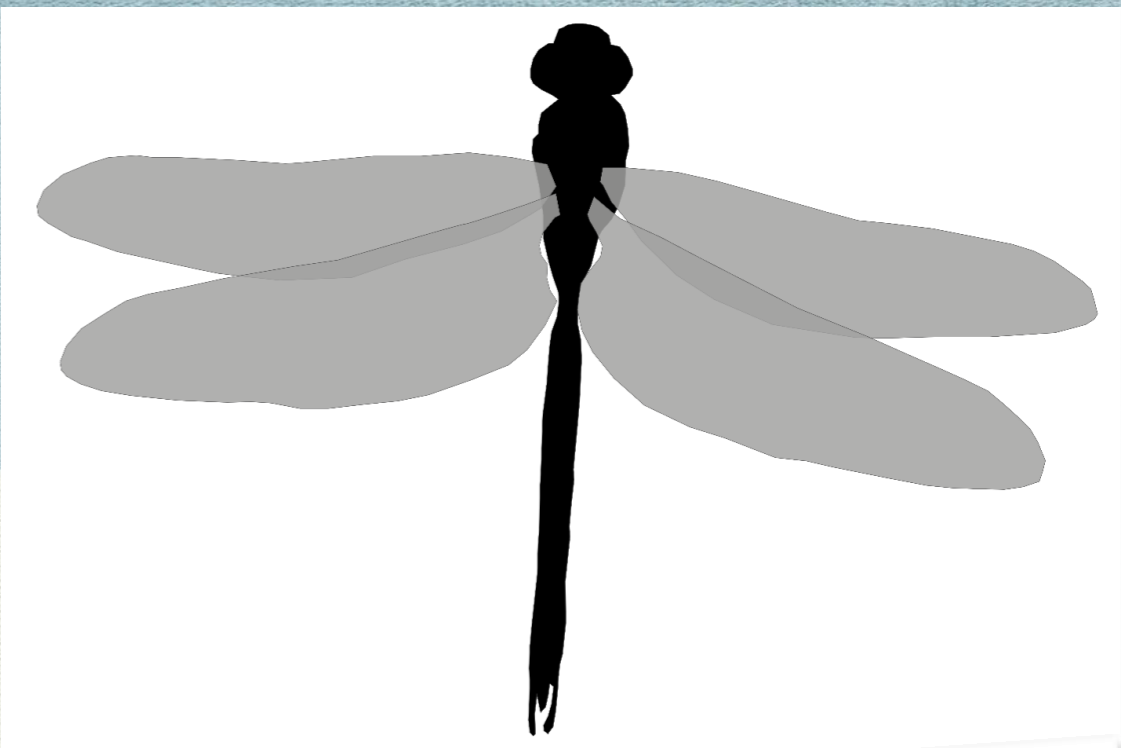
1 species in
Ohio



Gray Petaltail

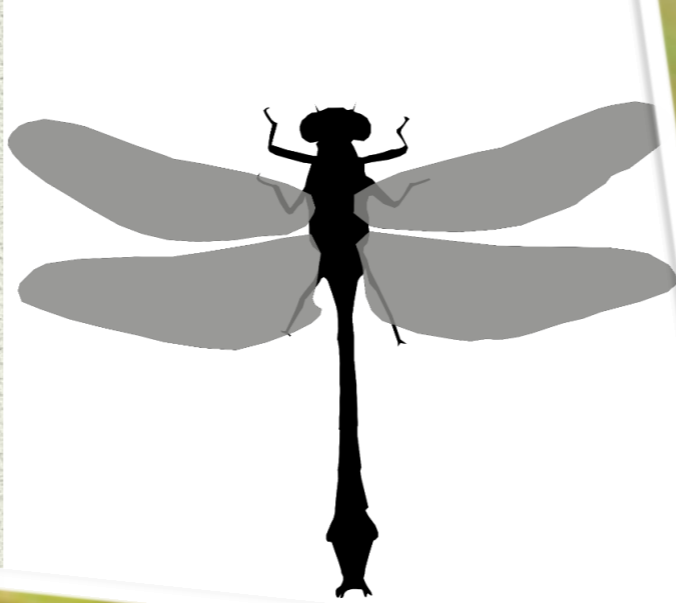
Aeschnidae: Darners

17 species in Ohio



Gomphidae: Clubtails

30 species in Ohio



Black Shoulder Spiny Leg

© Kyle Bailey



Unicorn Clubtail

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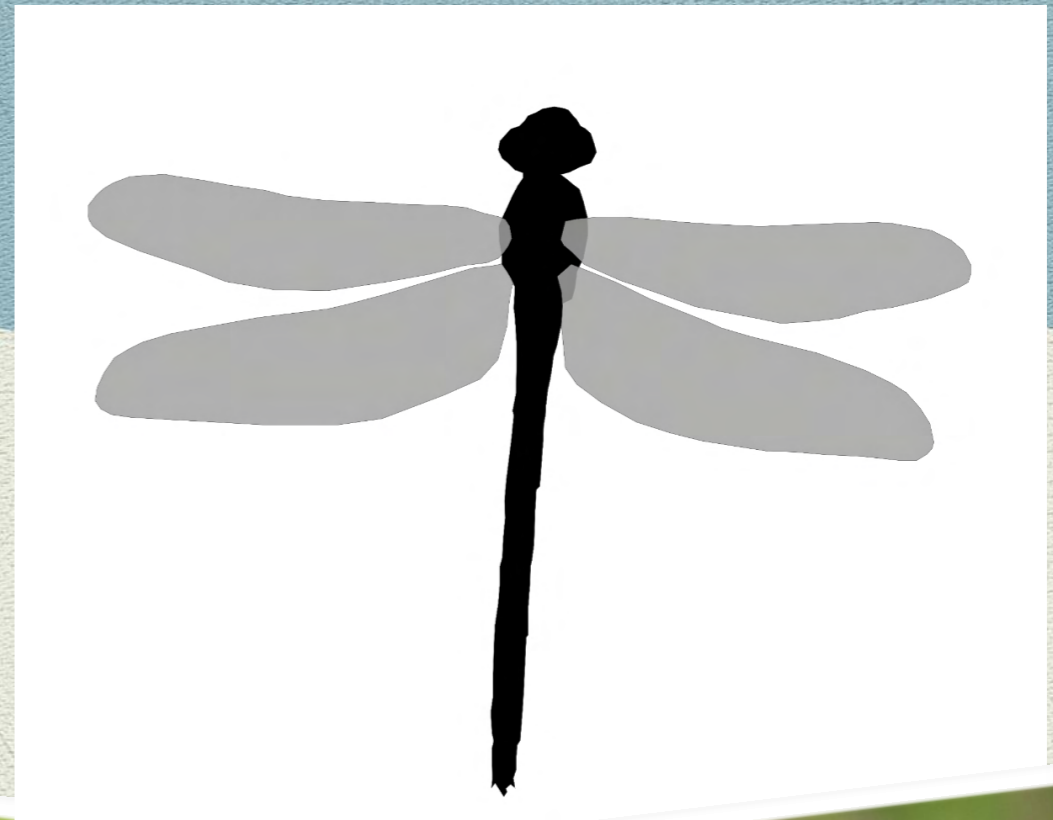
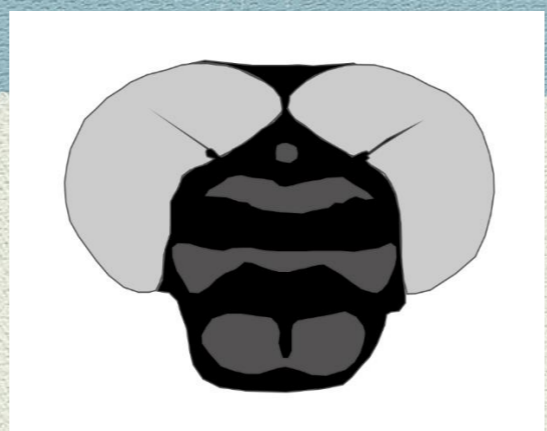


Pygmy Clubtail

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Cordulegasteridae: Spiketails

5 species in Ohio



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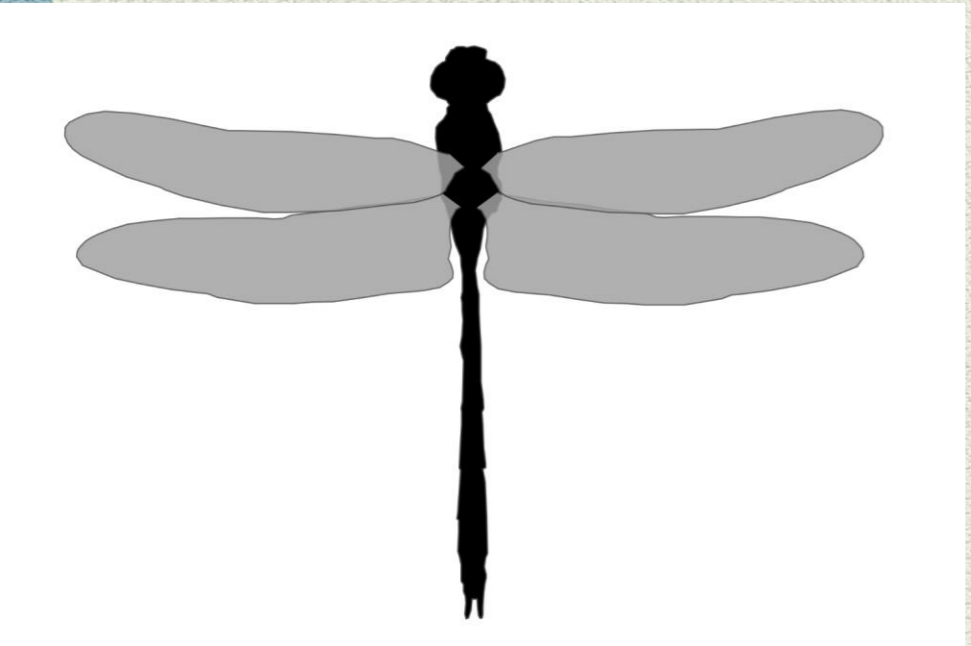


Arrowhead Spiketail

Amanda Kriner

Macromiidae: Cruisers

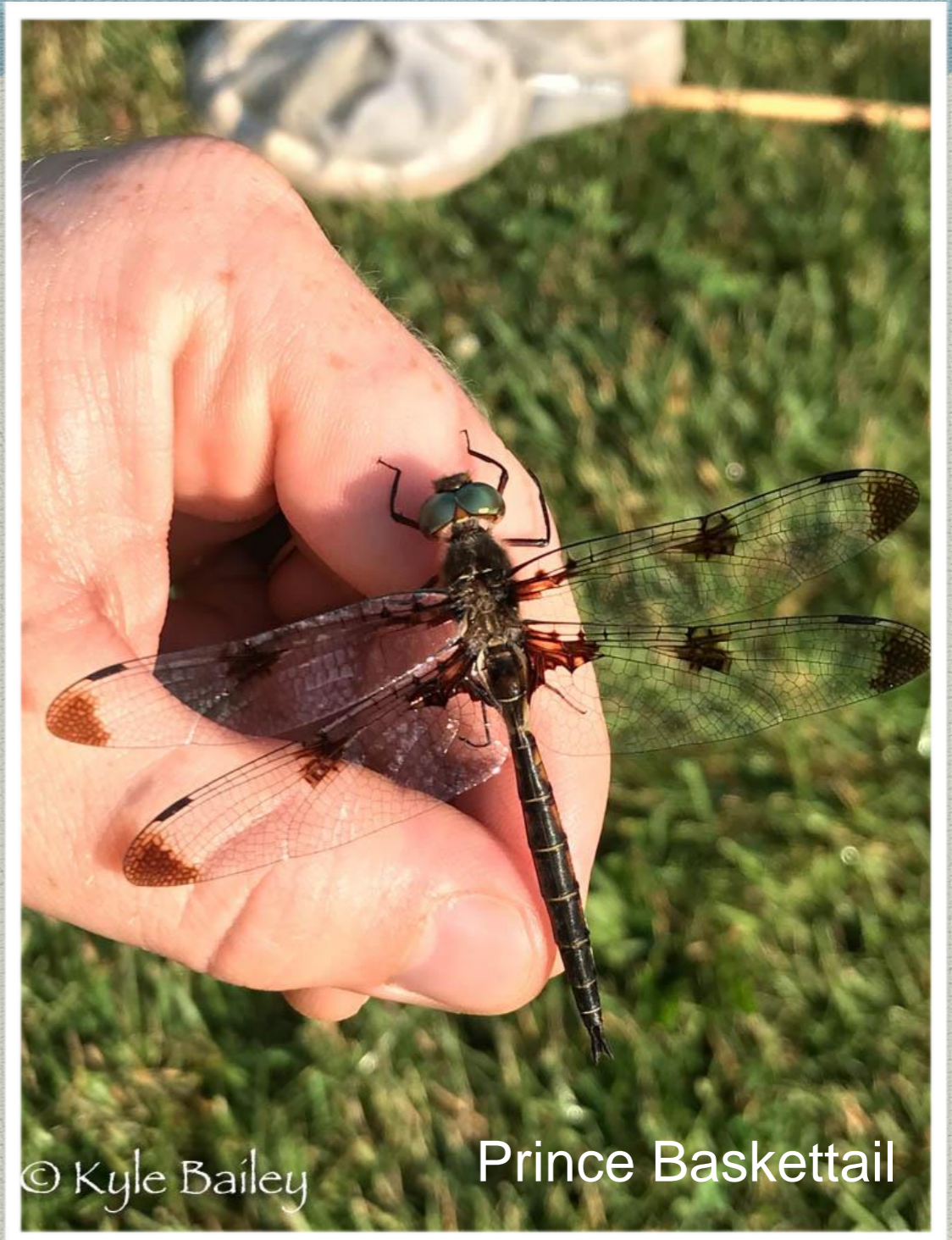
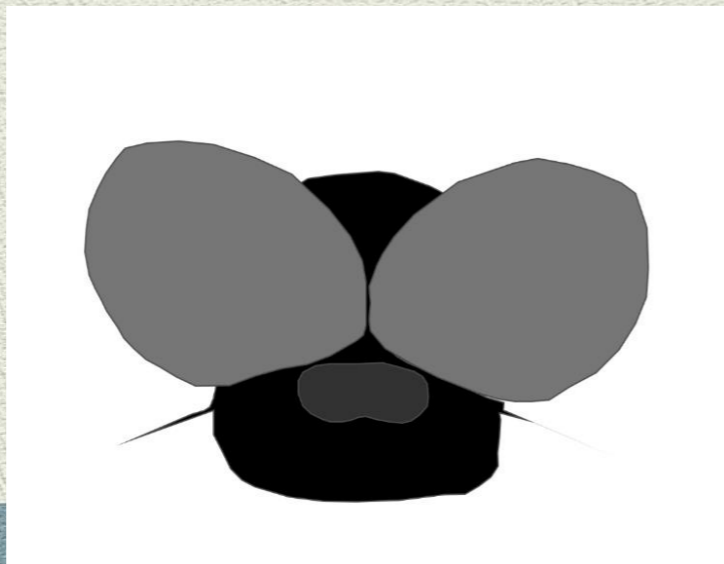
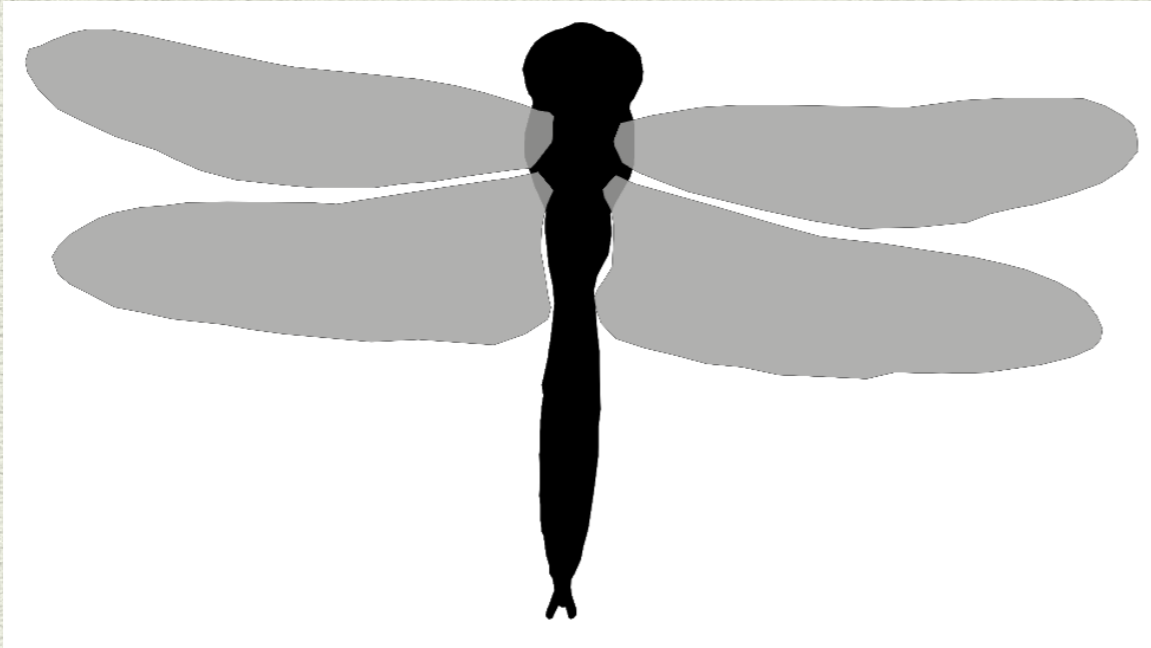
7 species in Ohio



Stream Cruiser

Corduliidae: Emeralds & Baskettails

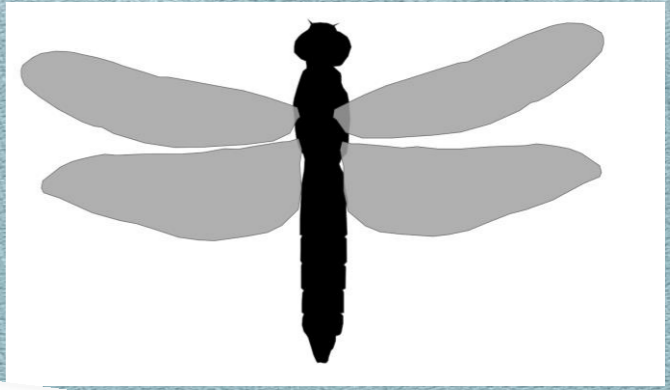
17 species in Ohio



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Prince Baskettail

Lebellulidae: Skimmers



38 species in Ohio



Banded Pennant



Black Saddlebags



Dot-tailed Whiteface



Painted Skimmer

You never know what might show!



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Questions?

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