# 2017 Ohio Dragonfly Survey Species Range Maps

Maps created by Jim Lemon Annotations, compilation, and illustrations by MaLisa Spring

# Read this page first!

# **General Map info:**

Maps are in a color gradient showing most recent (darker) and older records (lighter). New county records are denoted with a small white dot in the center of the county. Taxa are grouped by Family, but are otherwise alphabetical by common name.

# **Photography Notes:**

Some species maps have notes on which parts of the body to photograph. These are not always feasible given the cooperation of the specimen, so do not be disheartened when you are unable to get all of the recommended angles for identification. Anything is better than nothing, and we will do our best to identify the specimens with what you have.

Some specimens really do not like to cooperate to get their photo taken. You can use a net to catch the dragonfly or damselfly and then photograph it in hand. The best way to safely secure them without damage is to hold them by the wings behind their back. Be conscious of the rules of wherever you are. If you are at a park, be sure to check in with management beforehand to get permission to use a net on their land.

# **Collection Notes:**

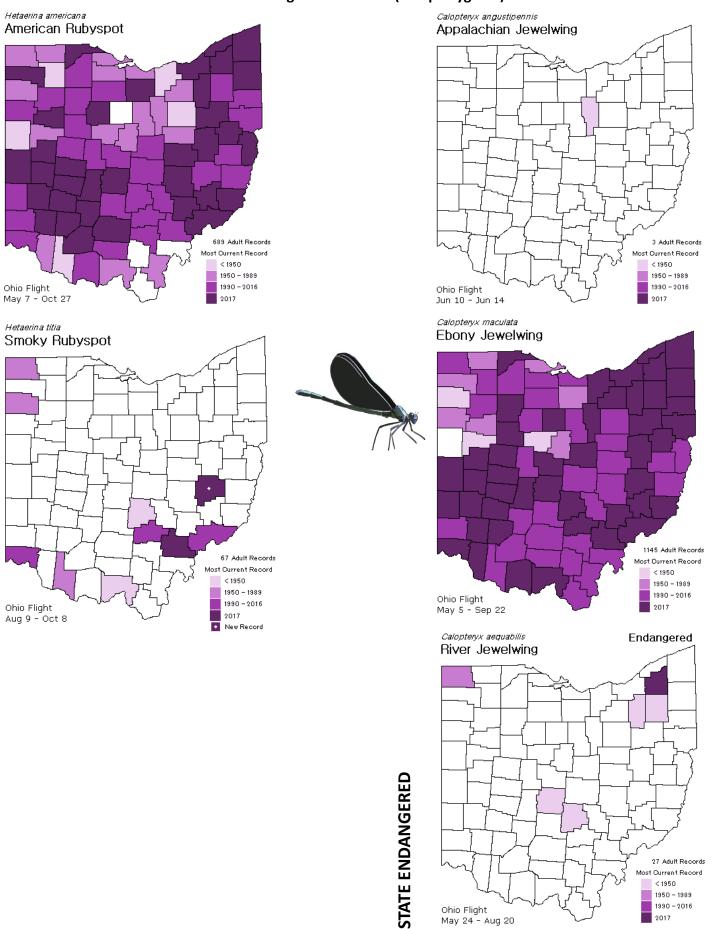
Some species cannot be verified without looking at minute characters. I have included some photography tips that should help, but that list is not all inclusive and several groups are best identified in hand. Make sure that you have collection permission where you are sampling. We have several permits for various locations and sampling supplies if you choose to do so. Avoid collecting state endangered or threatened species unless you have the Scientific Collecting permit and have followed the proper protocols.

# Reasons to collect specimens:

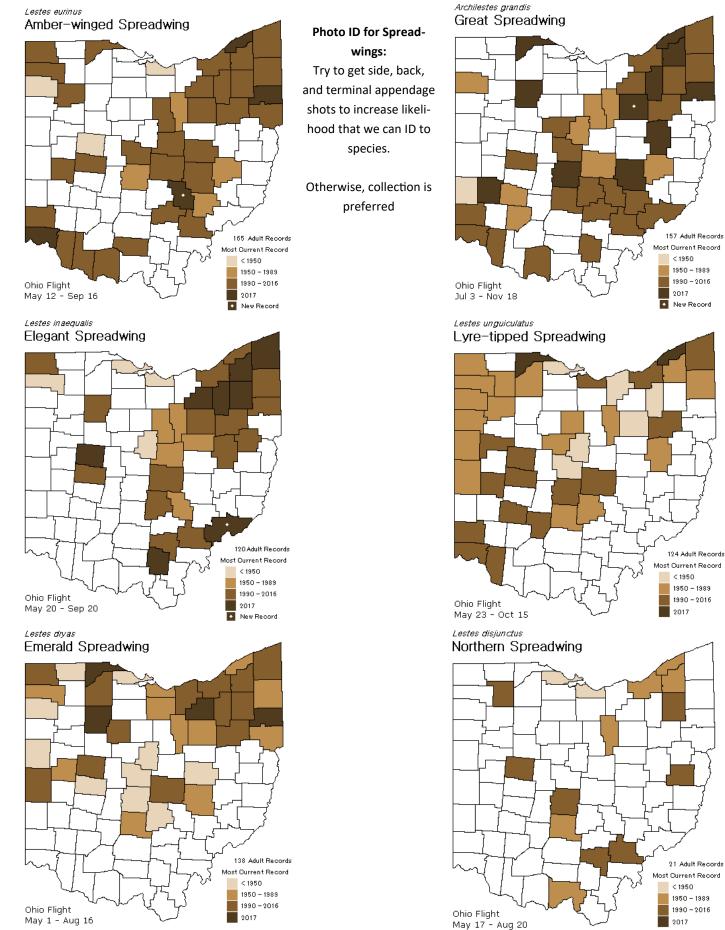
- 1. Archival of genetic information that can be analyzed for population changes, descriptions of new species or subspecies, and to preserve specimens for future generations.
- 2. Taxonomy is changing, and what we know as one species today, might actually be two or three species that are only distinguishable by some obscure character. By saving a voucher specimen, we can go back to the original and see all of the characters, compared to a subsection of characters from a photo.

Alternatives to killing specimens for collection: Larval shells that are left behind after molting can be collected and identified. These are much more challenging for the layperson to identify, but we accept larval shells with proper date and location information. They can be stored in a dry container with a collection label and given to the State Coordinator (MaLisa Spring)

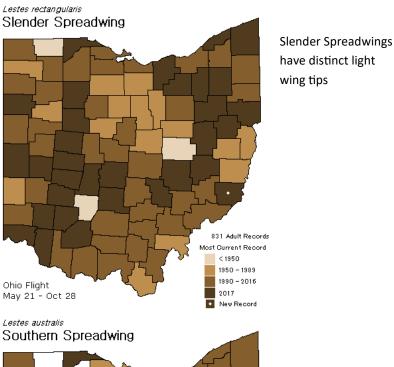
# **Broad Winged Damselflies (Calopterygidae)**

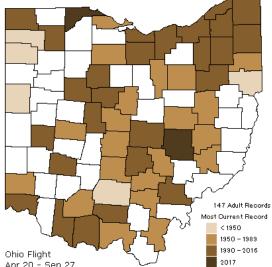


# Spread Winged Damselflies (Lestidae)



## Spread Winged Damselflies (Lestidae)

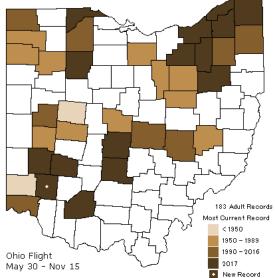


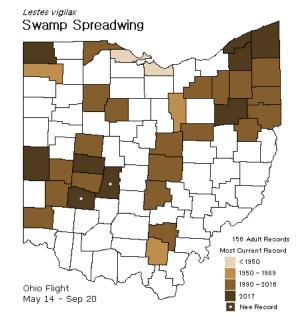


Female Sweetflag Spreadwings have a long ovipositor that extends past the tip of the abdomen

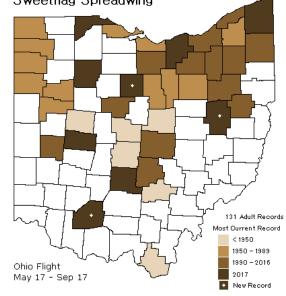
Apr 20 - Sep 27

#### Lestes congener Spotted Spreadwing





#### Lestes forcipatus Sweetflag Spreadwing



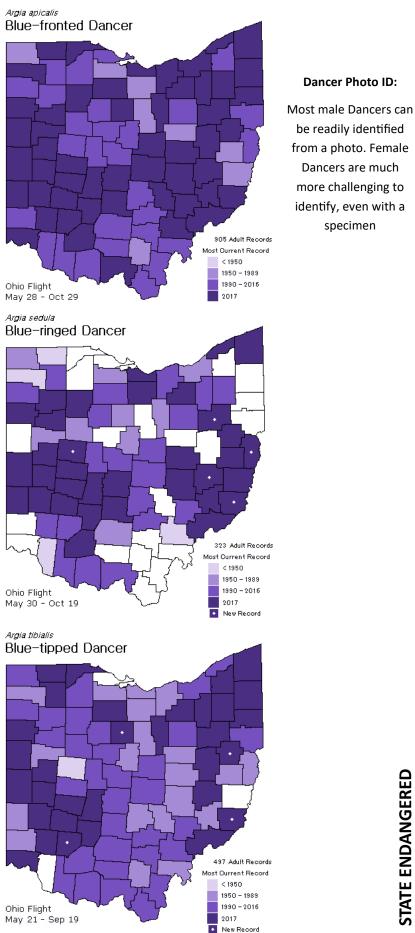
**Spotted Spreadwings** have distinct spots on the underside of the thorax

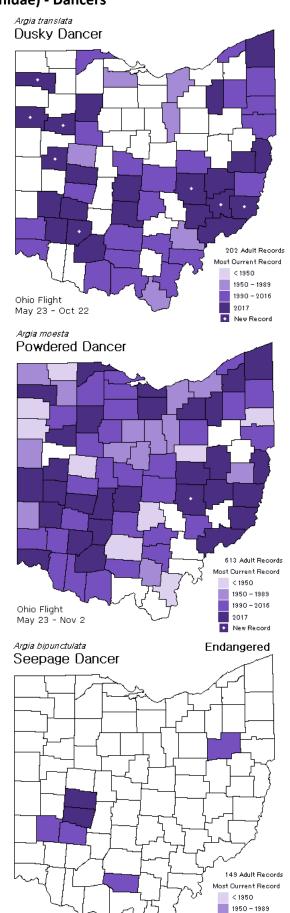
Photo ID for Spreadwings:

Try to get side, back, and terminal appendage shots to increase likelihood that we can ID to species.

Otherwise, collection is preferred

# Pond Damselflies (Coenagrionidae) - Dancers





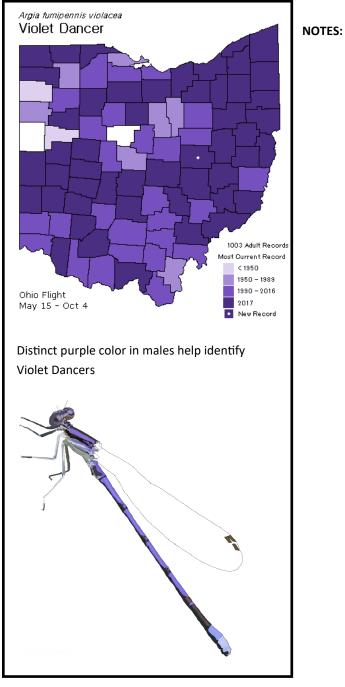
1990 - 2016

2017

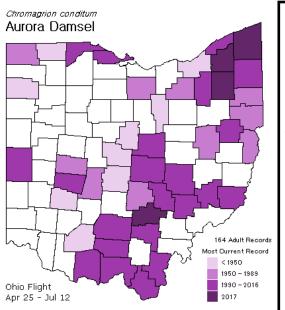
STATE ENDANGERED

Ohio Flight May 22 - Oct 3

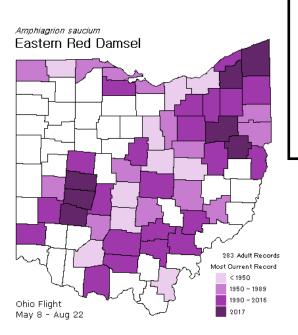
# Pond Damselflies (Coenagrionidae) - Dancers



### Pond Damselflies (Coenagrionidae)



The Aurora Damsel male has a distinct bottle shape on the top of their thorax and no shoulder stripe. Both males and females have yellow on at least the lower half of their thorax.

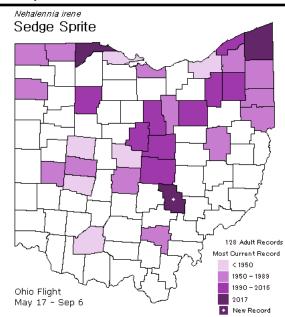


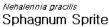
The Red Damsel is distinctly red. Watch out in southern Ohio for the Duckweed Firetail, which is unreported in Ohio, but has been found across the river in West Virginia. The Duckweed Firetail males have less black on their thorax compared to the Red Damsel.

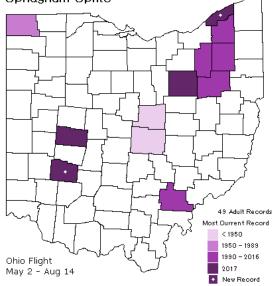
# Photo ID for Sprites:

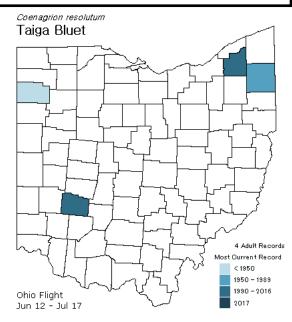
Sprites are really small, metallic green damselflies. Try to get a side profile shot and then a close up shot of the top of the "neck" (prothorax) in females or a side shot of the male terminal appendages.

If they will not cooperate for the above shots, you can try gently netting them and hold by the wings.

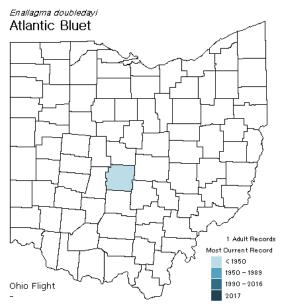




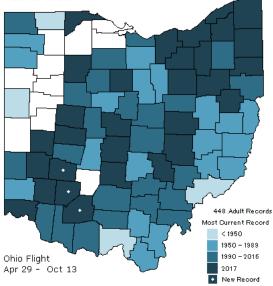




# Pond Damselflies (Coenagrionidae) - Bluets



Enallagma aspersum Azure Bluet



Enallagma boreale

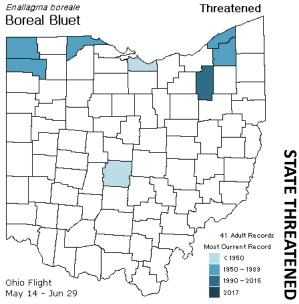
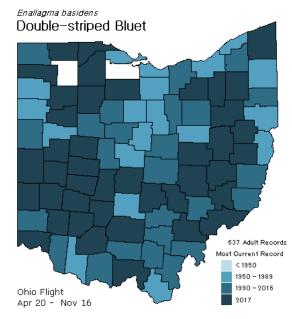
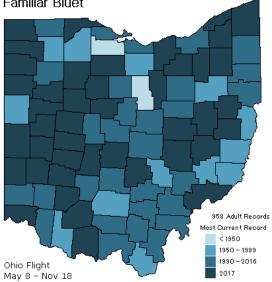


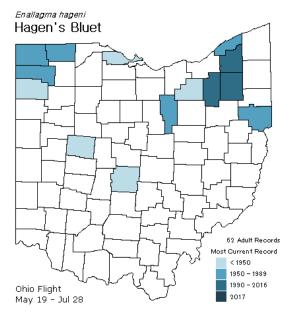
Photo ID for Bluets: Try to get a shot of the side and a close up side shot of the terminal appendages. Angles showing the eyespots are also helpful. Most females are challenging to ID via photo.

Collection is preferred for any of the mostly blue species.







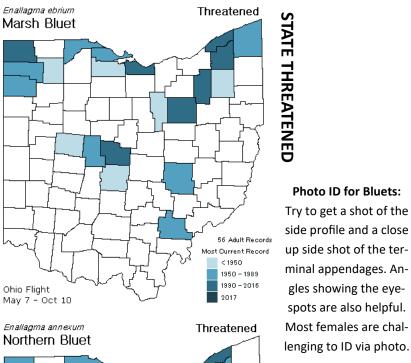


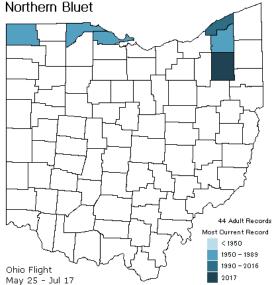
# Pond Damselflies (Coenagrionidae) - Bluets

**Photo ID for Bluets:** 

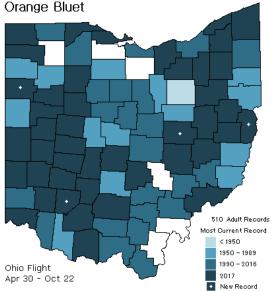
Collection is preferred for any of the mostly blue species.

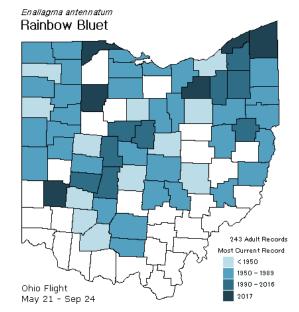
STATE THREATENED



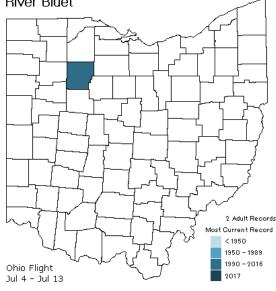


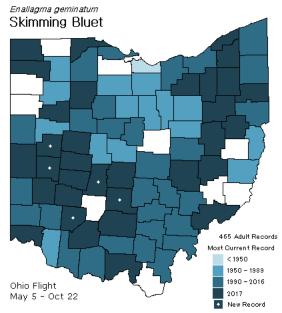
Enallagma signatum





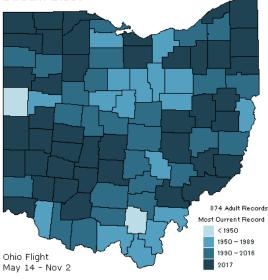




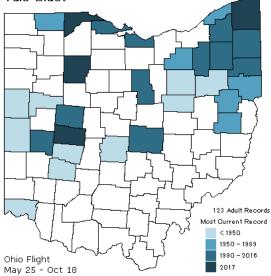


# Pond Damselflies (Coenagrionidae) - Bluets

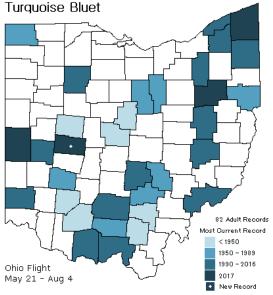




Enallagma carunculatum Tule Bluet





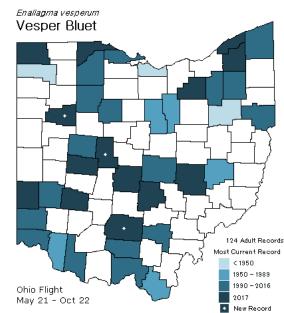


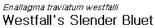
Vesper Bluets are dusk fliers. Watch for them as the sun sets.

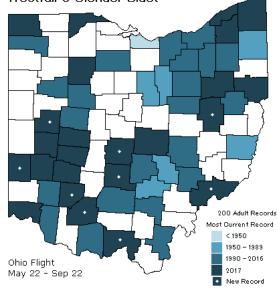
# Photo ID for Bluets:

Try to get a shot of the side profile and a close up side shot of the terminal appendages. Angles showing the eyespots are also helpful. Most females are challenging to ID via photo.

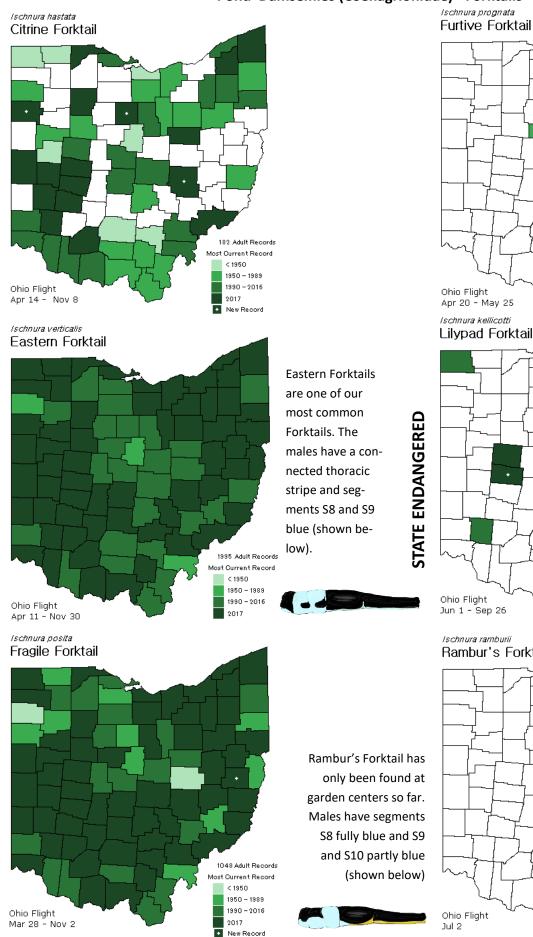
Collection is preferred for any of the mostly blue species.

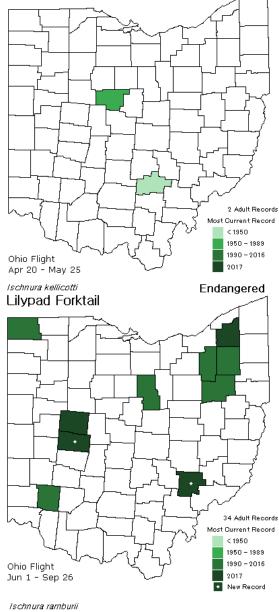


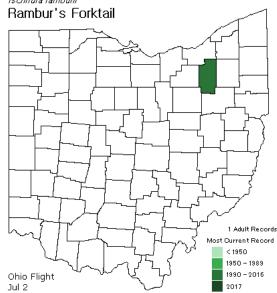




### Pond Damselflies (Coenagrionidae) - Forktails

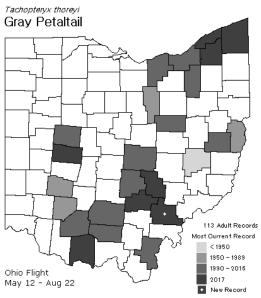






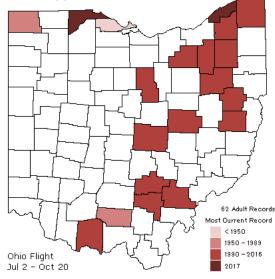
11

# Petaltails (Petaluridae)



### Darners (Aeshnidae)

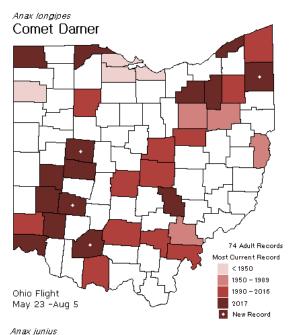




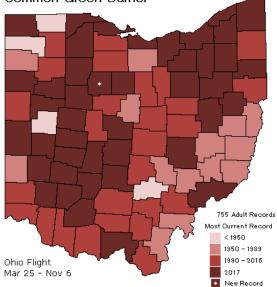
### Photo ID for Darners:

Try to get shots of the side and back, with close ups of the top of the forehead and the side of the terminal appendages.

Try to net darners so you can then take photos of specimens in hand. Otherwise, these are really challenging to photograph



# Common Green Darner



STATE ENDANGERED

### Darners (Aeshnidae)

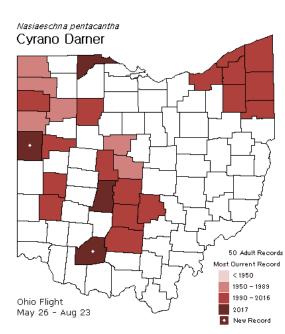
Photo ID for Darners: Try to get shots of the side and back, with close ups of the top of the forehead and the side of the terminal appendages.

Try to net darners so you can then take photos of specimens in

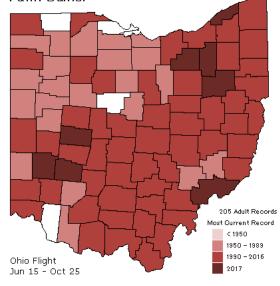
hand. Otherwise, these

are really challenging to

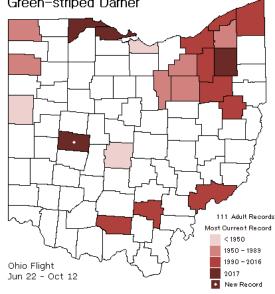
photograph

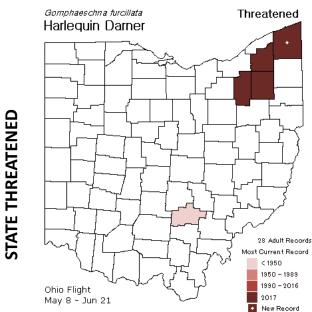


<sup>Boyeria</sup> vinosa Fawn Darner

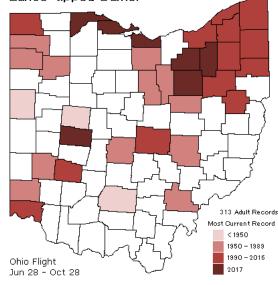


Aeshna verticalis Green-striped Darner





#### Aeshna constricta Lance-tipped Darner



Endangered





### 13

STATE ENDANGERED

# Darners (Aeshnidae)

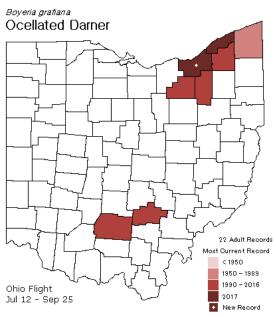
Photo ID for Darners: Try to get shots of the side and back, with close ups of the top of the forehead and the side of the terminal appendages.

Try to net darners so you can then take photos of specimens in

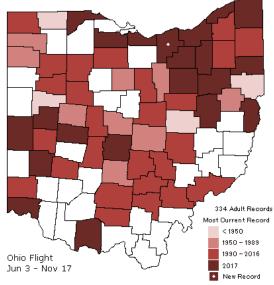
hand. Otherwise, these

are really challenging to

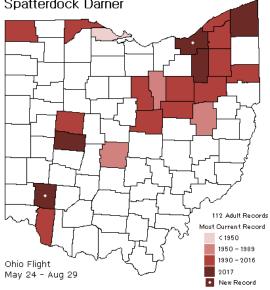
photograph

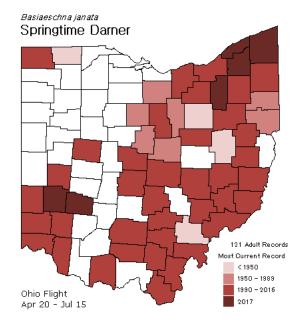


Aeshna umbrosa Shadow Darner

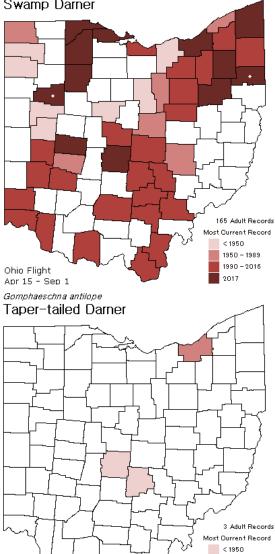


Rhionaeschna mutata Spatterdock Darner





#### Epiaeschna heros Swamp Darner



1950 - 1989

1990 - 2016

2017

14

Ohio Flight Jun 19 - Jun 25

# Darners (Aeshnidae)

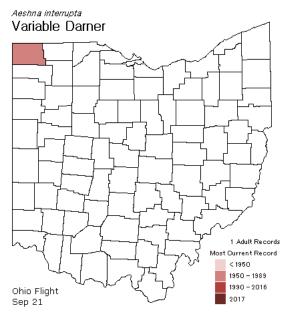


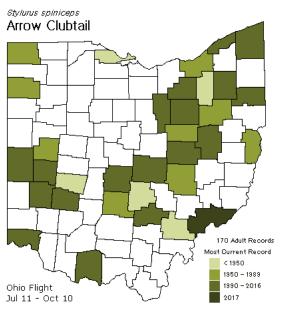


Photo ID for Clubtails: This group is especially tricky. Try to get as many angles as possible. If you are lucky, they will sit and let you get a few shots.

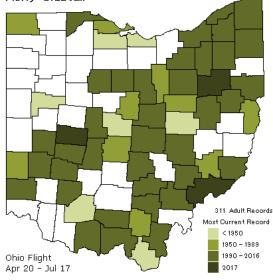
Collection of specimens is recommended for the highest likelihood of

getting a species ID

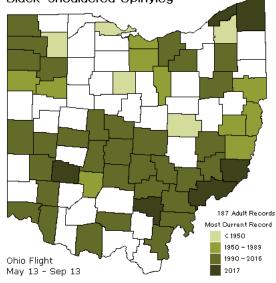
vetted.

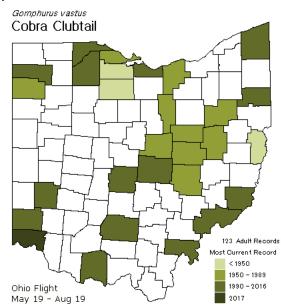


Phanogomphus lividus Ashy Clubtail

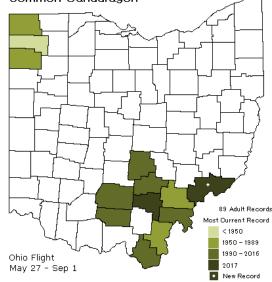


Dromogomphus spinosus Black-shouldered Spinyleg





#### Progomphus obscurus Common Sanddragon



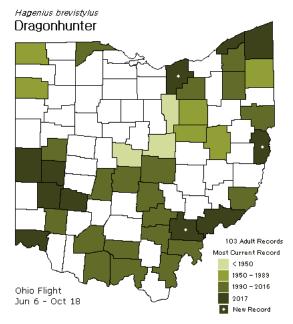
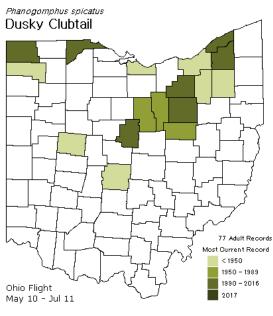


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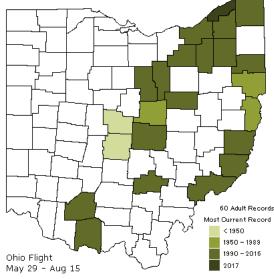
Collection of specimens is recommended for the highest likelihood of

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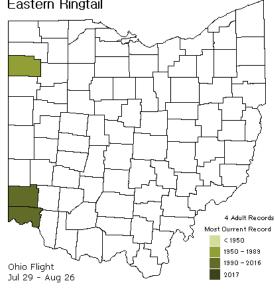
vetted.

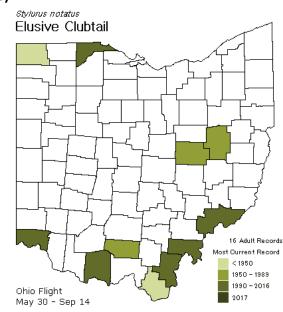


<sup>Stylogomphus</sup> albistylus Eastern Least Clubtail

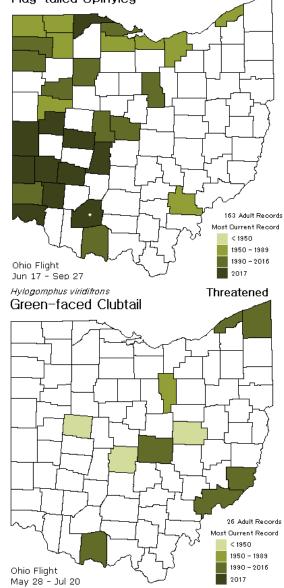


Erpetogomphus designatus Eastern Ringtail





#### Dromogomphus spoliatus Flag-tailed Spinyleg



### 17

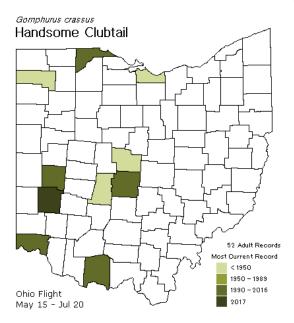
STATE THREATENED

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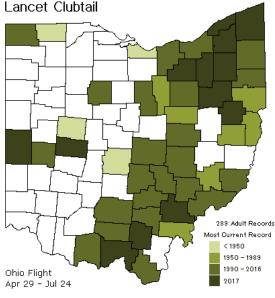
Collection of specimens is recommended for the highest likelihood of

getting a species ID

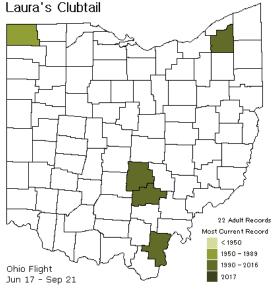
vetted.

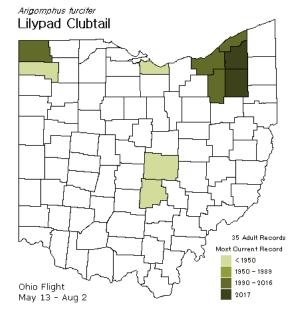


Phanogomphus exilis

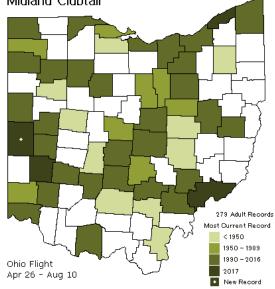


*stylurus laurae* Laura's Clubta





#### Gomphurus traternus Midland Clubtail



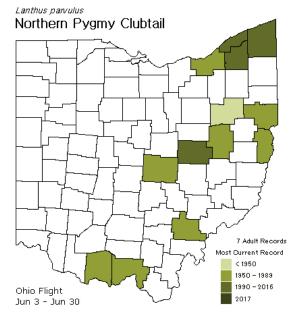
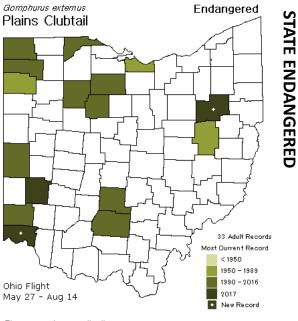


Photo ID for Clubtails: This group is especially tricky. Try to get as many angles as possible. If you are lucky, they will sit and let you get a few shots.

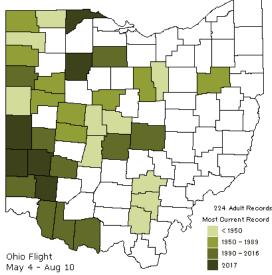
Collection of specimens is recommended for the highest likelihood of

getting a species ID

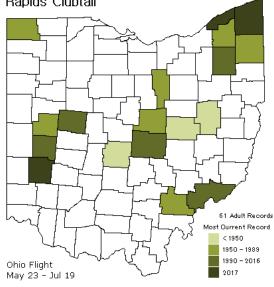
vetted.



Phanogomphus graslinelius Pronghorn Clubtail



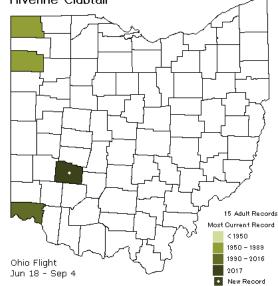




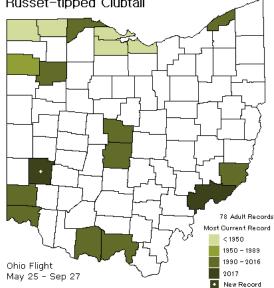


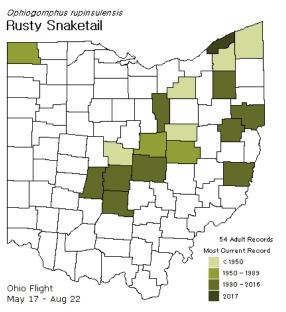


#### stylurus amnicola Riverine Clubtail

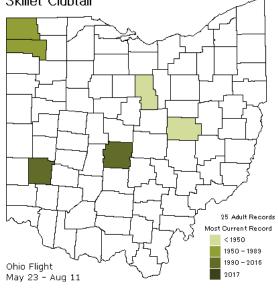








Gomphurus ventricosus Skillet Clubtail



Lanthus vernalis Southern Pygmy Clubtail

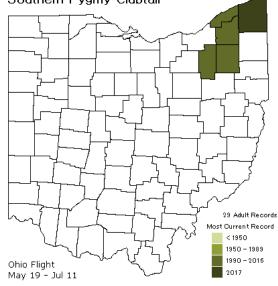
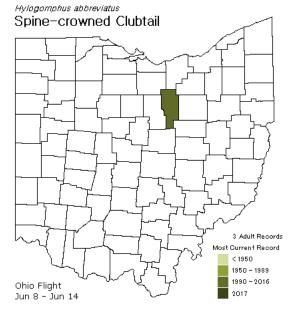
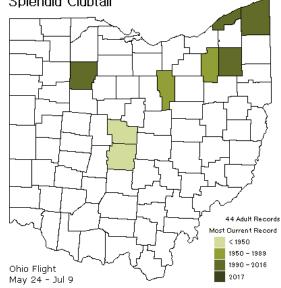


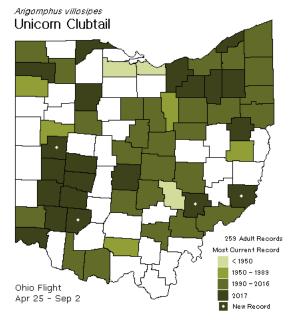
Photo ID for Clubtails: This group is especially tricky. Try to get as many angles as possible. If you are lucky, they will sit and let you get a few shots.

Collection of specimens is recommended for the highest likelihood of getting a species ID vetted.

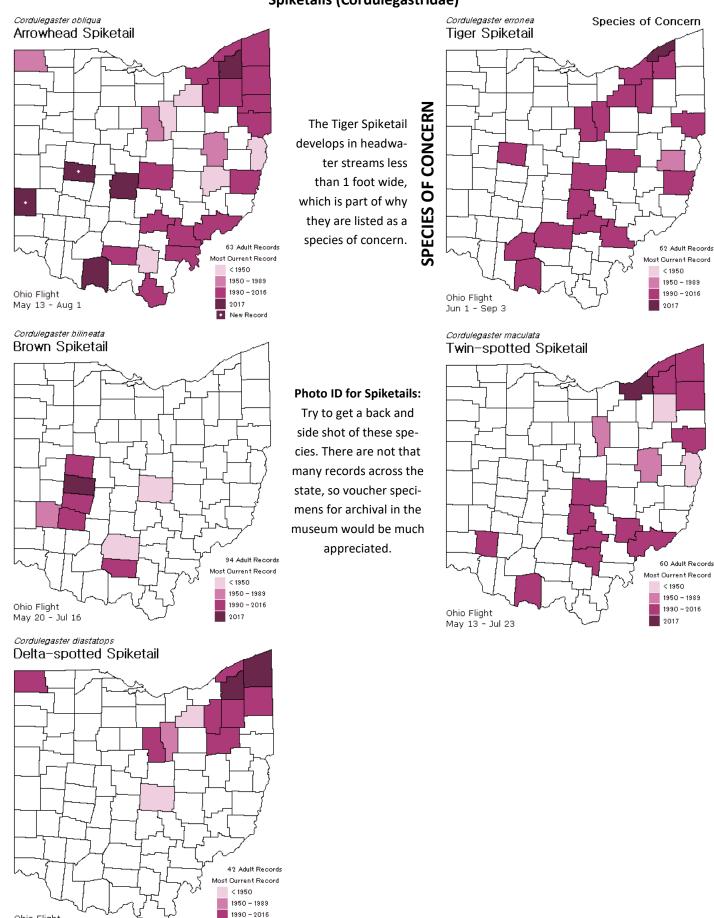


#### Gomphurus lineatitrons Splendid Clubtail





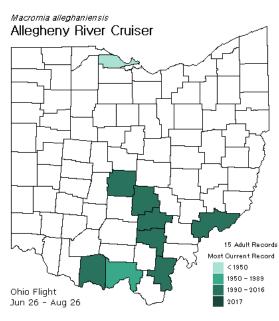
## Spiketails (Cordulegastridae)



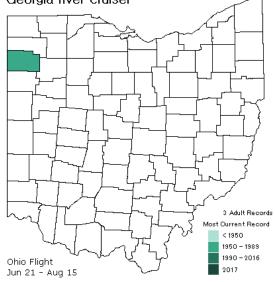
Ohio Flight May 19 - Jul 7

2017

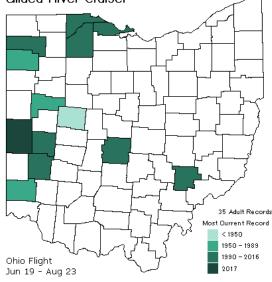
### **Cruisers (Macromiidae)**



Macromia illinoiensis georgina Georgia river cruiser

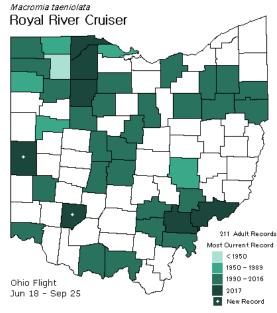


Macromia pacifica Gilded River Cruiser

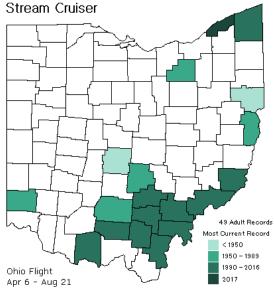


**Photo ID for Cruisers:** Try to get shots of the side and back, assuming you can find them resting. Taxonomy potentially murky with several "hybrids" reported regularly.

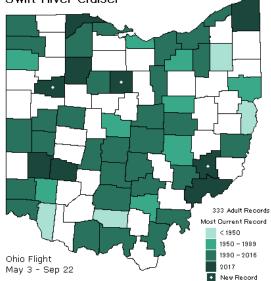
Cruisers fly long lengths down river channels, so they are hard to see, harder to catch, and even harder to photograph on the wing. Try to catch them if you can swing fast enough.



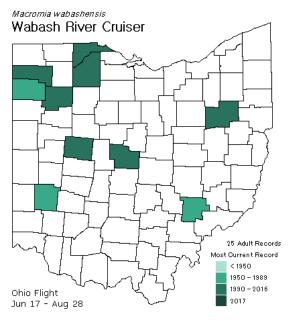
Didymops transversa



#### Macromia illinoiensis Swift River Cruiser



# Cruisers (Macromiidae)



Note that this is no longer considered a species, but the map is included anyway.

NOTES:

# **Emeralds (Corduliidae)**

There are several

State Threatened and Endangered species of Emeralds. Be very careful collecting specimens to make sure you avoid collecting the Hine's Emerald.

Photo ID is best with

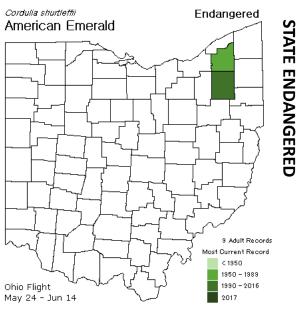
a back and side shot.

Having a close up side

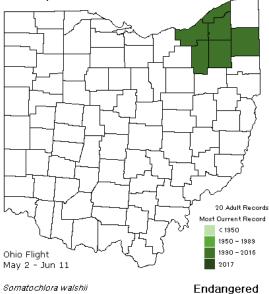
shot of terminal ap-

pendages is also help-

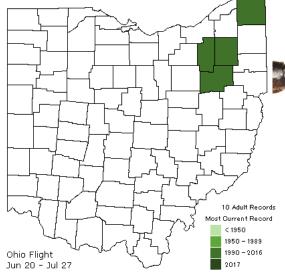
ful.



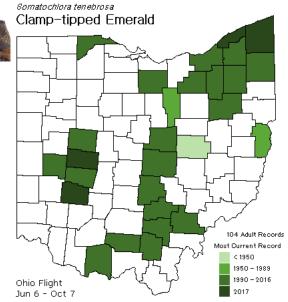




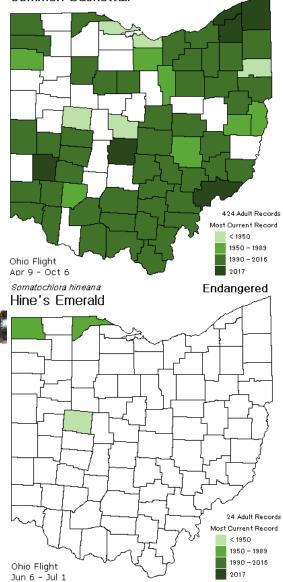








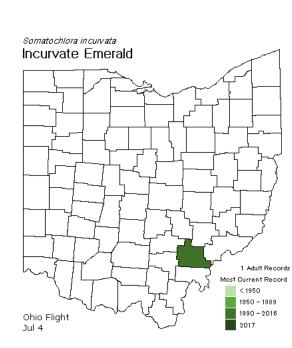
#### Epitheca cynosura Common Baskettail



STATE ENDANGERED

FEDERALLY ENDANGERED

## **Emeralds (Corduliidae)**

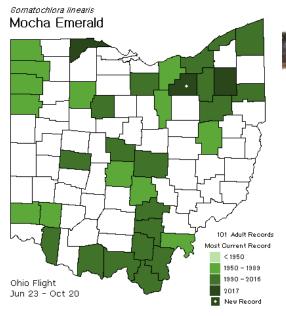


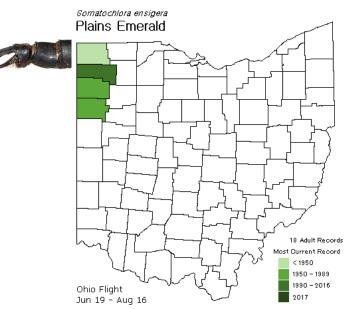
Somatochlora kennedyi Kennedy's Emerald



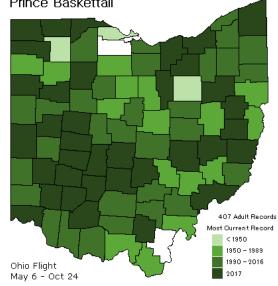
There are several State Threatened and Endangered species of Emeralds. Be very careful collecting specimens to make sure you avoid collecting the Hine's Emerald.

Photo ID is best with a back and side shot. Having a close up side shot of terminal appendages is also helpful.





#### <sub>Epitheca princeps</sub> Prince Baskettail



Endangered



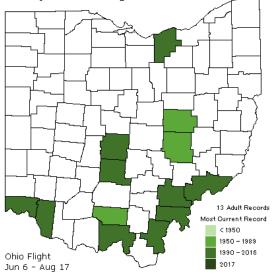


STATE ENDANGERED

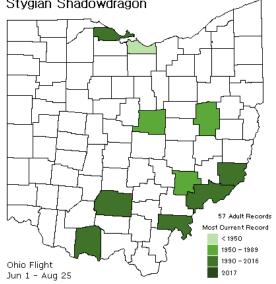
### **Emeralds (Corduliidae)**



Neurocordulia molesta Smoky Shadowdragon

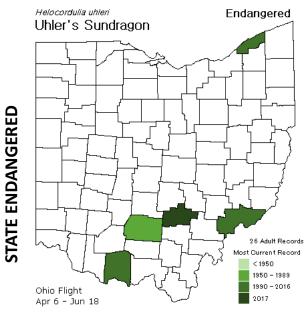


Neurocordulia yamaskanensis Stygian Shadowdragon

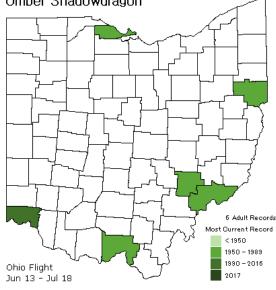


There are several State Threatened and Endangered species of Emeralds. Be very careful collecting specimens to make sure you avoid collecting the Hine's Emerald.

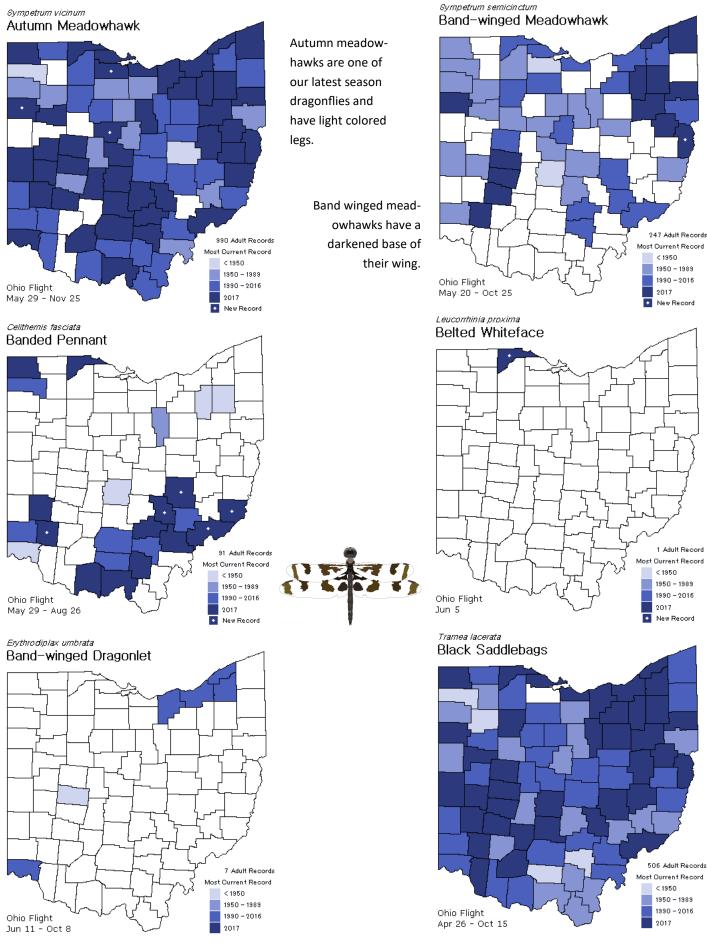
Photo ID is best with a back and side shot. Having a close up side shot of terminal appendages is also helpful.

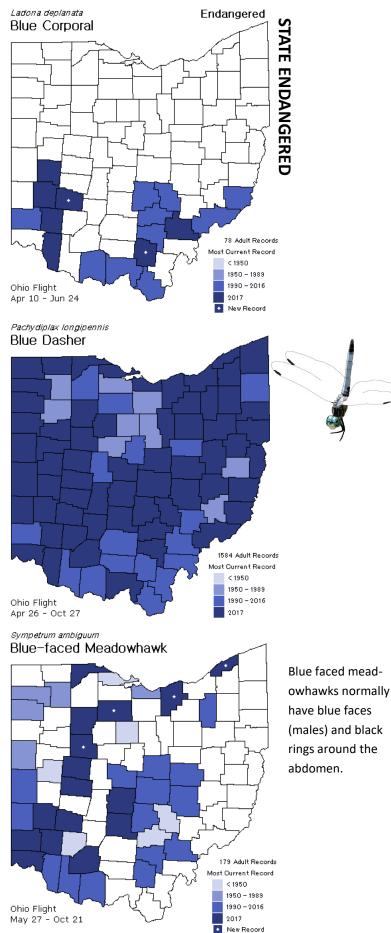


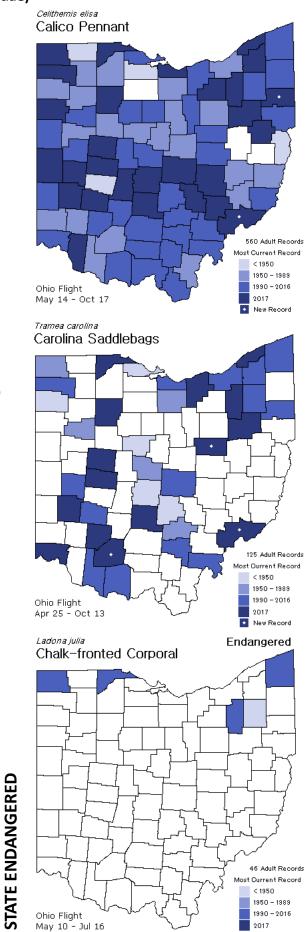
#### Neurocordulia obsoleta Umber Shadowdragon



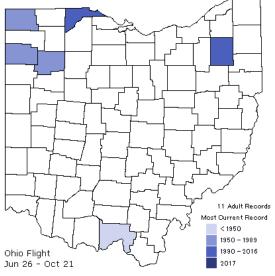
Both Sundragons and Shadowdragons are known to fly at dusk and right after dusk. These are hard to find because of their flight habit, when we aren't typically looking for dragonflies.





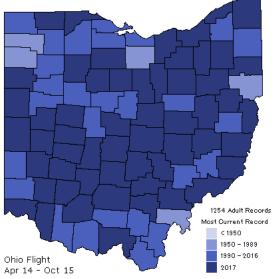


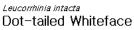
Sympetrum internum Cherry-faced Meadowhawk

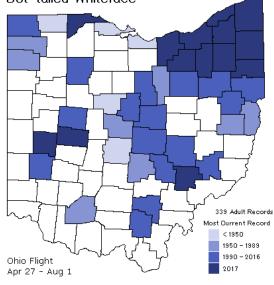


Meadowhawk identification via photo is contentious. Try to get them in hand and get a close up photo of the hamules and terminal appendages (underside)

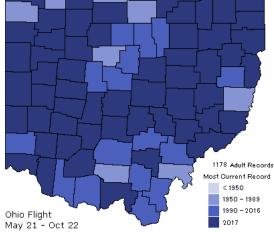




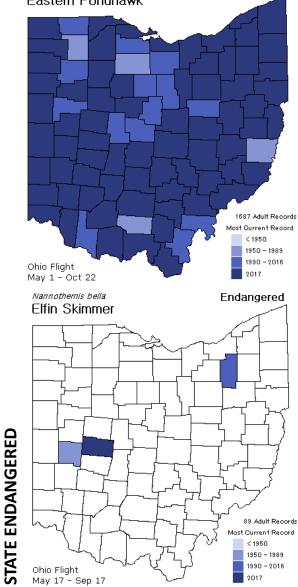


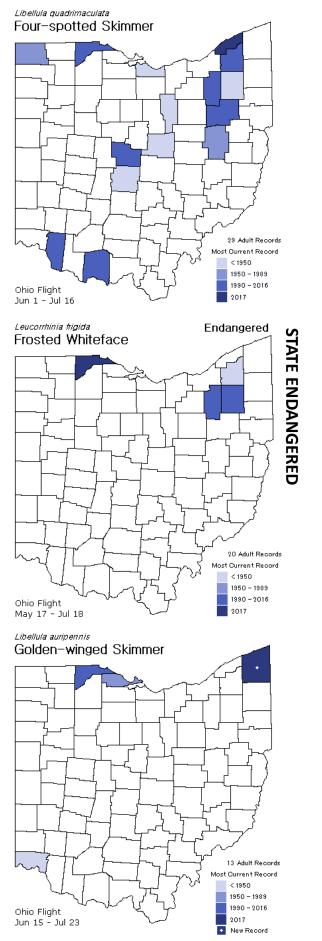


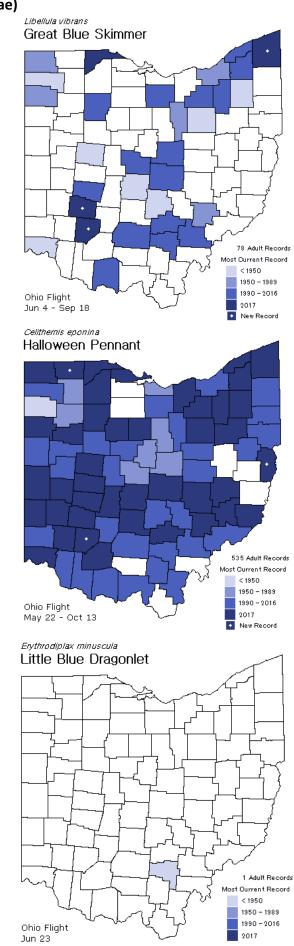


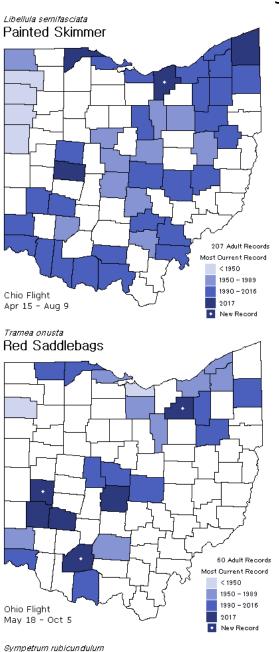


Erythemis simplicicallis Eastern Pondhawk

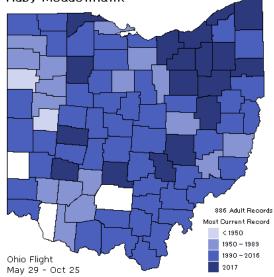




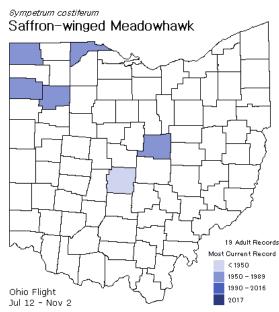




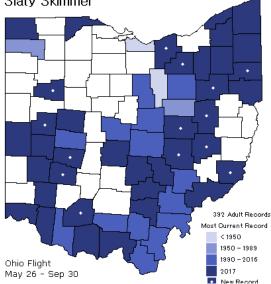
Ruby Meadowhawk



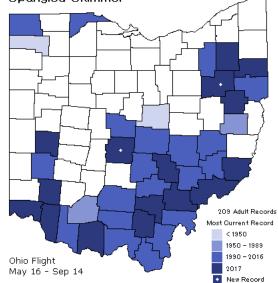
Meadowhawk identification via photo is contentious. Try to get them in hand and get a close up photo of the hamules and terminal appendages (underside)

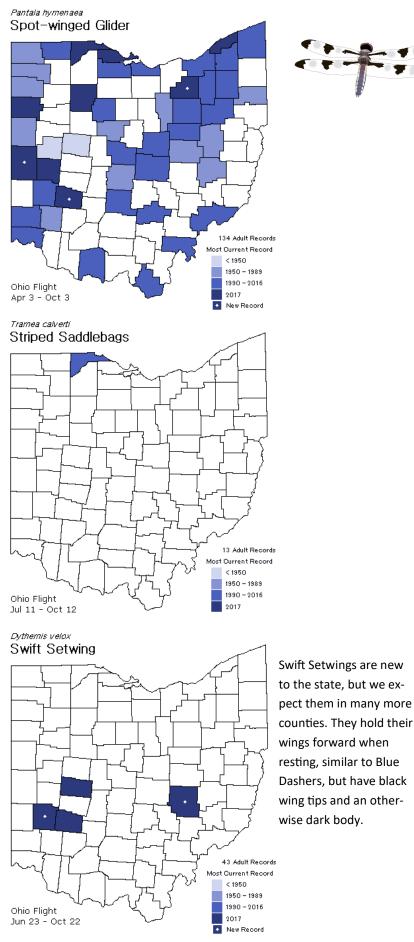


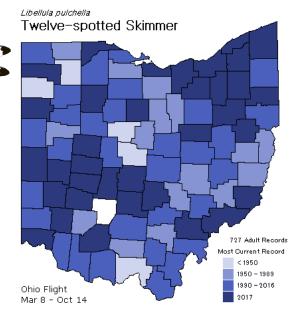
Libellula incesta Slaty Skimmer



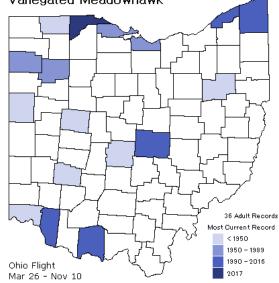








#### Sympetrum corruptum Variegated Meadowhawk



Pantala flavescens Wandering Glider

