

Damselflies and Dragonflies...an ode to Odes!

Dragonflies and damselflies are considered to be the most fascinating groups of insects. If nature had a list of rules and regulations, dragonflies certainly disobey speed limits; being the fastest and zaniest fliers. Their swift and erratic aerial displays include bullet-like dashes, sideways swerves, standstill hovers, and even backward darts. On the other hand, feeble flying damselflies violate nature's dress code by displaying vividly patterned uniforms in an array of fluorescent colors. These "flying jewels" proudly flaunt gaudy combinations of electrifying red, orange, blue, chartreuse, green, turquoise and bronze.

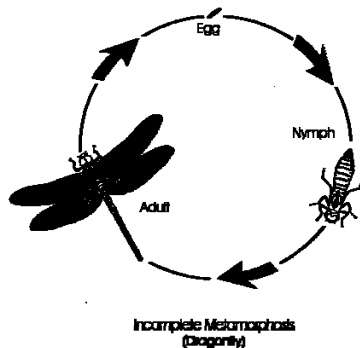
Dragonflies and damselflies are harmless insects classified in the scientific order Odonata, which refers to the serrated mandibles or jaws, found on the adults. People who study odonates (dragonflies and damselflies) simply call these insects "odes."

In Pennsylvania, approximately 170 species of "odes" have been recorded. Nescopeck State Park supports a variety of unpolluted aquatic habitats such as streams, spring seeps, vernal pools, marshes, swamps, ponds, and a lake. An outstanding 75 species of dragonflies and damselflies have been reported.

Use the enclosed checklist to record the "odes" you discover as you explore the park's wetlands, streams, trails, and even open areas. A summer stroll around Lake Frances may reveal a dozen species.

ANATOMY

Simply stated, adult dragonflies and damselflies are narrow shaped insects with three main body parts consisting of a head, thorax, and abdomen. The most obvious features about the head are two large compound eyes, two small antennae, and a mouth that's guarded by a pair of large mandibles. The thorax supports two pairs of wings and three pairs of legs. The legs are often guarded with spines that are useful in capturing prey. The stiff, rigid wings are intact and consist of many cells or veins. The long abdomen includes ten segments that contain reproductive organs used for breeding and egg depositing. The males have several claspers at the tip of their tenth abdominal segment while the females may have a bump or extended ovipositor beneath their lower



LIFE CYCLE OF NYMPHS

The life cycle of a dragonfly or damselfly begins from a tiny egg. When fully developed, a nymph emerges. Being predatory at every life stage, the hungry, aquatic nymph spends anywhere from a few months to several years living in streams or ponds. It eats and grows, periodically molting, thus becoming larger and larger.

It can take from two months up to four years for the nymph to complete its final growth stage. The fully developed nymph retreats from its wetland home and crawls toward dry land. It latches onto the nearest object such as emergent vegetation, a twig, or even a concrete wall beneath a bridge. In a matter of minutes, a transformed dragonfly or damselfly rips through the backside of the hardened skin or exuviae that was once the nymph.

ADULTS

The solar-charged adults are full of energy and constant action. The males are constantly searching for a mate, patrolling territories or chasing competing males. Lightning quick zigzags, sweeps, and swooshes are understatement when describing their aerial actions. The females are either catching flying insects such as pesky mosquitoes, or involved with mating and egg depositing. Regarding damselflies, this same aerial show happens as well, but in slow motion, as they are feeble and weak flyers.

THREATS

Water pollution and wetland destruction are the two biggest threats to dragonflies and damselflies. Harmful contaminants and sedimentation entering into streams, rivers, ponds, and lakes can kill aquatic life, such as the nymphs of dragonflies and damselflies. Torrent currents and prolonged high water levels in streams and rivers, caused by flash flooding, may harm larvae and young adults. Wetland destruction and removing vegetation surrounding ponds and lakes destroys important breeding areas.

HINT: To view these critters; the observer of fast-flying dragonflies needs to be wide-eyed, alert and possess neck-snapping reflexes, while the observer of leisurely-flying damselflies needs to remain patiently calm and search meticulously in the low-lying wetland vegetation.



Special thanks to R. Koval, who compiled the information and text used in this checklist...who also possesses both the neck-snapping reflexes and calm patience needed to observe these amazing insects.

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For more information

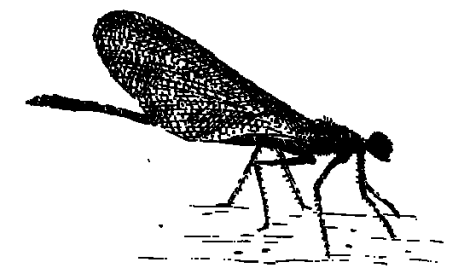
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Guide to Damselflies & Dragonflies



With expressive names like dasher, darner, skimmer, and cruiser; with colorful names like bluet, emerald, amberwing, and whiteface; and intimidating names like spiketail, clubtail, meadowhawk, and dragonhunter, it's no wonder we're fascinated by these mysterious creatures. They are without a doubt, the most colorful and ultimate flying predator of the insect world.



DAMSELFLIES						
<i>At rest, the wings of a damselfly will be folded.</i>						
	S	Flight Period				H
		1	2	3	4	

POND DAMSELS					
Eastern Red Damselfly <i>(Amphigrion saucium)</i>	U	■	■		M
Variable Dancer <i>(Argia fumipennis)</i>	C	■	■		SPO
Powdered Dancer <i>(Argia moesta)</i>	C	■	■		SPO
Dusky Dancer <i>(Argia translata)</i>	R		■	■	S
Aurora Damselfly <i>(Chromagrion conditum)</i>	C	■			VPM
Azure Bluet <i>(Enallagma aspersum)</i>	C	■	■		PM
Familiar Bluet <i>(Enallagma civile)</i>	C		■	■	PMO
Northern Bluet <i>(Enallagma cyathigerum)</i>	U	■			PM
Turquoise Bluet <i>(Enallagma divagans)</i>	U		■		SP
Stream Bluet <i>(Enallagma exsulans)</i>	C		■		S
Skimming Bluet <i>(Enallagma geminatum)</i>	C		■		P
Hagen's Bluet <i>(Enallagma hageni)</i>	C	■			PM
Orange Bluet <i>(Enallagma signatum)</i>	C		■		SP
Slender Bluet <i>(Enallagma traviatum)</i>	C	■			P
Vesper Bluet <i>(Enallagma vesperum)</i>	U		■		P
Fragile Forktail <i>(Ischnura posita)</i>	C	■	■	■	VPM
Eastern Forktail <i>(Ischnura verticalis)</i>	C	■	■	■	VPM
Sphagnum Sprite <i>(Nehalennia gracilis)</i>	U		■	■	PM
Sedge Sprite <i>(Nehalennia irene)</i>	C		■	■	PM

BROADWING DAMSELS					
Ebony Jewelwing <i>(Calopteryx maculata)</i>	C	■	■	■	SPO
Superb Jewelwing <i>(Calopteryx amata)</i>	R		■		S

If you are interested in choosing a field guide to help in the identification of these amazing 'hot rods' and 'flying jewels', please inquire at the park office.

	S	Flight Period				H
		1	2	3	4	

SPREADWINGS						
Common Spreadwing <i>(Lestes disjunctus)</i>	C	■				PM
Amber-winged Spreadwing <i>(Lestes eurinus)</i>	R	■				VM
Sweetflag Spreadwing <i>(Lestes forcipatus)</i>	R	■				VPM
Elegant Spreadwing <i>(Lestes inaequalis)</i>	U	■	■			PM
Slender Spreadwing <i>(Lestes rectangularis)</i>	C	■	■			VPM
Swamp Spreadwing <i>(Lestes vigilax)</i>	C	■	■			PM

DRAGONFLIES

At rest, the wings of a dragonfly will be open.

DARNERS						
Canada Darner <i>(Aeshna canadensis)</i>	C	■	■	■		MO
Spatterdock Darner <i>(Aeshna mutata)</i>	R	■	■			PMO
Black-tipped Darner <i>(Aeshna tuberculifera)</i>	U		■	■		PMO
Shadow Darner <i>(Aeshna umbrosa)</i>	C	■	■			CO
Green-striped Darner <i>(Aeshna verticalis)</i>	C	■	■	■		PMO
Common Green Darner <i>(Anax junius)</i>	C	■	■	■	■	PMO
Comet Darner <i>(Anax longipies)</i>	R	■	■	■		P
Springtime Darner <i>(Basiaeschna janata)</i>	C	■				SPO
Fawn Darner <i>(Boyeria vinosa)</i>	C	■	■			S
Ocellated Darner <i>(Boyeria faciana)</i>	R	■	■			S
Swamp Darner <i>(Epiaschna heros)</i>	R	■	■			PMO
Harlequin Darner <i>(Gomphaeschna furcillata)</i>	R	■	■			PMO

EMERALDS						
American Emerald <i>(Cordulia shurtleffi)</i>	C	■	■			PO
Racket-tailed Emerald <i>(Dorocordulia libera)</i>	U	■	■			PO
Common Baskettail <i>(Epiptera cynosura)</i>	C	■				PO
Prince Baskettail <i>(Epiptera princeps)</i>	C	■	■			PO

	S	Flight Period				H
		1	2	3	4	

EMERALDS (CONTINUED)						
Beaverpond Baskettail <i>(Epiptera canis)</i>	R	■	■			PMO
Uhler's Sundragon <i>(Helocordulia uhleri)</i>	U	■				S

SKIMMERS						
Calico Pennant <i>(Celithemis elisa)</i>	C	■	■			PMO
Halloween Pennant <i>(Celithemis eponina)</i>	U	■	■			PMO
Eastern Pondhawk <i>(Erythemis simplicicollis)</i>	C	■	■	■		PMO
Dot-tailed Whiteface <i>(Leucorrhinia intacta)</i>	C	■	■			PMO
Spangled Skimmer <i>(Libellula cyanea)</i>	C	■	■			PMO
Slaty Skimmer <i>(Libellula incesta)</i>	C	■	■			PMO
Chalk-fronted Corporal <i>(Libellula julia)</i>	C	■	■			PMO
Widow Skimmer <i>(Libellula luctuosa)</i>	C	■	■			PMO
Common Whitetail <i>(Libellula lydia)</i>	C	■	■			PMO
Twelve-spotted Skimmer <i>(Libellula pulchella)</i>	C	■	■			PMO
Four-spotted Skimmer <i>(Libellula quadrimaculata)</i>	C	■	■			PMO
Painted Skimmer <i>(Libellula semifasciata)</i>	C	■	■			PMO
Blue Dasher <i>(Pachydiplax longipennis)</i>	C	■	■			PMO
Wandering Glider <i>(Pantala flavescens)</i>	C	■	■	■		PMO
Spot-winged Glider <i>(Pantala hymenaea)</i>	C	■	■	■		PMO
Eastern Amberwing <i>(Perithemis tenera)</i>	C	■	■			PMO
Jane's Meadowhawk <i>(Sympetrum janeae)</i>	C		■	■		PMO
Ruby Meadowhawk <i>(Sympetrum rubicundulum)</i>	C		■	■		PMO
Band-winged Meadowhawk <i>(Sympetrum semicinctum)</i>	R		■	■		PMO
Yellow-legged Meadowhawk <i>(Sympetrum vicinum)</i>	C		■	■		PMO
Carolina Saddlebags <i>(Tramea carolina)</i>	C	■	■			PMO
Black Saddlebags <i>(Tramea lacerata)</i>	U		■	■		PO

	S	Flight Period				H
		1	2	3	4	

CLUBTAILS						
Unicorn Clubtail <i>(Argemomphus villosipes)</i>	C	■				P
Lancet Clubtail <i>(Gomphus exilis)</i>	C	■	■			PMO
Ashy Clubtail <i>(Gomphus lividus)</i>	C	■	■			SPO
Dusky Clubtail <i>(Gomphus spicatus)</i>	C	■	■			SPO
Dragonhunter <i>(Hagenius brevistylus)</i>	U	■	■			S
Northern Pygmy Clubtail <i>(Lantus parvulus)</i>	R	■	■			S

SPIKETAILS						
Delta-spotted Spiketail <i>(Cordulegaster diastatops)</i>	C	■	■			S
Twin-spotted Spiketail <i>(Cordulegaster maculata)</i>	C	■	■			S
Arrowhead Spiketail <i>(Cordulegaster obliqua)</i>	R	■	■			S

CRUISERS						
Stream Cruiser <i>(Didymops transversa)</i>	C	■				SP
Illinois River Cruiser <i>(Macromia illinoensis)</i>	C	■	■			S

LEGEND

S – RELATIVE ABUNDANCE AND STATUS:
 C – *common*; species should be seen in proper habitat during flight period
 U – *uncommon*; species present in limited numbers and not certain to be seen
 R – *rare*; species very uncommon or seen during brief flight period

FLIGHT PERIOD:
 1 Late Spring Late April to May
 2 Early Summer June to Mid-July
 3 Late Summer Mid-July to August
 4 Fall September to early November

H – HABITAT:
 S stream or creek
 P pond or lake
 M marsh
 V vernal pool
 O open area, field or road