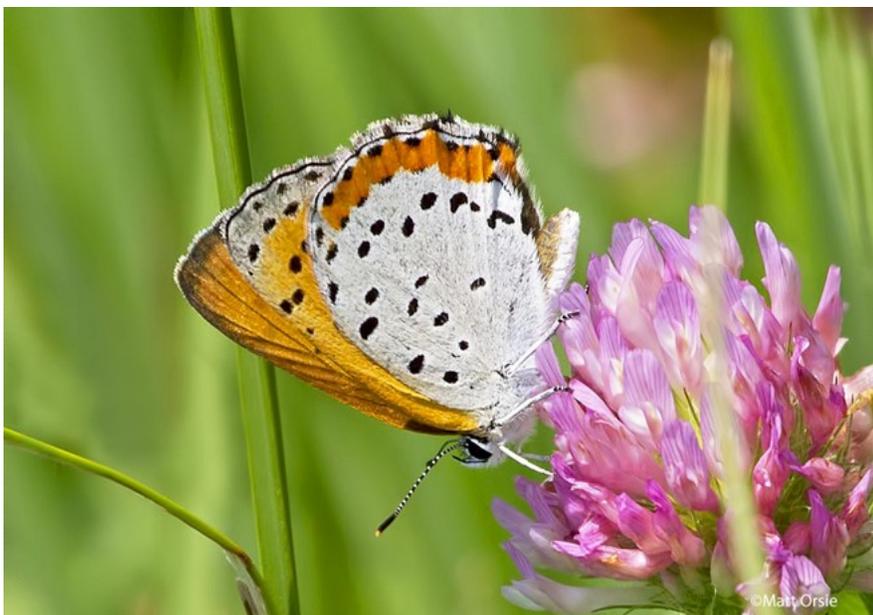


## Bronze Copper (*Lycaena hyllus*)



male



Matt Orsie

female



www.jeffippen.com

### Description

Dorsal male – *coppery brown* with faint spots, *solid ragged orange subterminal band on HW*

Dorsal female – *orange marked to orange FW* with prominent dark spots and darker edge - variable, *coppery brown HW with solid ragged orange subterminal band*

Ventral both – *FW orange* with pale subterminal band, *HW pale with solid orange subterminal band*, both with prominent dark spots

Wing span: 32-42 mm (1¼ - 1⅝ inches)

Much larger than American Copper (*Lycaena phlaeas*: ⅞ - 1⅝ inches), and brighter ventrally.

### Range & Habitat

Distribution occurs from Maine south to Maryland, then west to Colorado and southern Manitoba and across southern Canada. It prefers wet meadows and fields usually near streams, rivers, or ponds staying in the vicinity of its host plant. Medium specialist: requires special conditions, not fully understood.

It nectars on a variety of wildflowers including clovers, blackberry, daisy, boneset, dogbane, knotweed, and asters. Females nectar more readily than males.

### Phenology & Reproduction

Bivoltine/Trivoltine. The first brood emerges in May and flies through June or early July. The second brood emerges in late July or early August and flies into early September. A third partial brood may be seen in late September to mid-October. It overwinters as an egg.

Eggs are laid singly on the underside of leaves and stems where they overwinter. In spring the eggs hatch and larvae feed on newly emerging leaves. First brood adults are active from late May - early July. The second brood develops and adults are active from late July - early September. Eggs from the second brood overwinter.

Larvae are velvety yellow-green with a darker green dorsal stripe and is covered with white hairs.

Primary larval hosts are water dock (*Rumex verticillatus*) and curly dock (*R. crispus*). Also reported to feed on some species of knotweeds (*Polygonum* sp).

*Lycaena hyllus* larvae

J1750



Mark Rainey

© 2011 Mark Rainey

*Rumex crispus*



Chris Tracey Western PA Conservancy

*Rumex verticillatus*



Jim Brighton MD Biodiversity Project

*Polygonum lapathifolium*



James Vanderhorst WVDNR

*Polygonum amphibium*



Elizabeth ByersWVDNR

## Bog Copper (*Lycaena epixanthe*)



Fran Pope WV Butterfly Atlas

male



Fran Pope WV Butterfly Atlas

female



Fran Pope WV Butterfly Atlas

### Description

Dorsal male – purplish brown with *darks spots* near base, *orange chevrons trailing edge HW*

Dorsal female – brown with more extensive *dark spots*, *orange chevrons trailing edge HW*

Ventral both – *white/pale gray* with spots, *orange chevrons on trailing edge HW*

### Range & Habitat

Distribution from the Canadian Maritimes west to Minnesota and south to New Jersey and northern Pennsylvania west to Michigan. The West Virginia and Maryland population in Cranesville Swamp, Preston Co is a disjunct remnant and is the southernmost occurrence. It is a low, weak flier, staying near its host plant, and a poor colonizer. Specialist: rare, bog dependent species.

Adults primarily nectar on cranberry blooms.

### Phenology & Reproduction

Univoltine. Flight period varies with local conditions, but usually occurs from early July to late July or early August. It overwinter as an egg laid on the underside of cranberry leaves.

Eggs are laid singly on the underside of leaves or stem of cranberry (*Vaccinium macrocarpon* or *V. oxycoccos*) where they overwinter. After hatching, larvae feed on cranberry.

Caterpillar is green, slug-like and covered with white hairs.

*Lycaena epixanthe* larvae

PHOTO PENDING PERMISSION

*Vaccinium oxycoccos*



Brian Streets WVDNR

*Vaccinium macrocarpon*



Betsy Leppo Western PA Conservancy

## Silver-bordered Fritillary (*Boloria selene*)



Susan Olcott WVDNR



Susan Olcott WVDNR

### Description

Dorsal both – orange with typical fritillary black markings – *edge of FW and HW black, FW rounded not angled like meadow fritillary*

Ventral both – *edge of both wings with white spots, mosaic of white spots and yellow or rust ground color, post median row of black dots*

### Range & Habitat

Distribution mostly northern from Alaska, across Canada, New England and Labrador, south through the Great Lakes and down the Appalachians to Virginia. It is usually found in wet meadows and around marshes with willows, alders, spirea, and other shrubs. Medium specialist: widespread but ecologically struggling.

A variety of flowering plants found in wetlands or nearby uplands are used for nectar including dogbane, milkweed, ironweed, yarrow, daisy, and mints.

### Phenology & Reproduction

Trivoltine. The first brood emerges in May and flies through June. The second brood emerges in early July and flies into August. In some years, a partial third flight may begin in September and fly into October. It overwinters as a partially grown larva from the second generation.

Eggs are laid singly on larval hosts. Second brood eggs hatch and feed on violets – 3<sup>rd</sup> or so instar larvae diapause to overwinter. Feeding continues in spring with first brood adults emerging in mid-May or so. Second brood emerges in early July, with sometimes a partial third brood emerging in late August.

Larvae are brownish with numerous yellowish spines in rows with black spots around the base of the spines; two long black spines project over the head .

It uses various species of common violet for its host plant, especially those associated with wetter habitats – marsh blue violet (*Viola cucullata*), northern white violet (*V. pallens*), striped violet (*V. striata*), primrose-leaved violet (*V. primulifolia*), and common blue violet (*V. sororia*).

*Boloria selene* larvae (ssp. *tollandensis*)

PHOTO PENDING PERMISSION



Robert Cox

*Viola cucullata*



Betsy Leppo Western PA Conservancy

*Viola sororia*



Bill Hubrik

*Viola primulifolia*



Robert Cox

*Viola striata*

## Baltimore Checkerspot (*Euphydryas phaeton*)



Fran Pope WV Butterfly Atlas



Fran Pope WV Butterfly Atlas

### Description

Dorsal – Unmistakable in eastern US – black with *white dotted bands and orange dotted edge*, male has some orange basally, female less so

Ventral – mosaic of *basal orange dots and more marginal white dots outlined in black*, orange terminal dots

Note – *bright orange antennal clubs*

### Range & Habitat

Distribution is in scattered, local colonies from Nova Scotia west across Canada to Manitoba and south to northern Ohio and New Jersey. It occurs in wetlands that harbor its larval host and adjacent uplands for nectar resources. Medium specialist: somewhat adaptive, but still a narrow lifestyle.

Baltimore's nectar on a variety of nectar flowers including milkweed, dogbane, daisy, clovers, and viburnum.

### Phenology & Reproduction

Univoltine. Early instar larva feed gregariously inside large webs on turtlehead (*Chelone glabra*) until it diapauses in mid-August and spends the winter inside the web. In the spring larva disperse and feed singly on a variety of species until they pupate, they emerge as adults in late May and early June.

Larvae is tawny orange with several transverse rows of black lines and black branched spines. The anterior and posterior ends of the body are black; the similar Harris' Checkerspot has less black on the ends. Larva thrash violently in their web when disturbed to deter predators and parasites.

Early instar larvae require turtlehead as a larval host, but emerging studies suggest that they may accept and thrive on English plantain (*Plantago lanceolata*) as well. Later instar larvae emerging from diapause in the spring, when turtlehead isn't available, will feed on the plantain, arrowwood (*Viburnum recognitum*), common lousewort (*Pedicularis canadensis*), Japanese honeysuckle (*Lonicera japonica*), and probably others.

*Euphydryas phaeton* larvae—this species has a greater amount of black pigmentation anteriorly and posteriorly (head, T1, T2, A9, and A10) than the similar *Chlosyne harrisii*.



Tom Murray

Second and third instar *Euphydryas phaeton* larva in webs enclosing turtlehead plants.



Pam Byrne WV Butterfly Atlas



Pam Byrne WV Butterfly Atlas

*Chelone glabra*



Bill Hubrik MD Biodiversity Project



Jim Brighton MD Biodiversity P roject

*Plantago lanceolata*



Pete Woods

## Harris' Checkerspot (*Chlosyne harrisii*)



Fran Pope WV Butterfly Atlas



www.jeffhippen.com

### Description

Dorsal both – typical orange and black checkerspot pattern – *heavy black wing borders and median stripe*

Ventral both – FW red-orange with black markings on leading edge, *subterminal band of white chevrons, orange edge*; HW *mosaic of bright red-orange and cream spots outlined in black, subterminal band of white chevrons and orange edge*

Usually slightly smaller than Silvery Checkerspot, larger than Pearl Crescent

### Range & Habitat

Distribution is mostly northern across southern Canada east of the Rockies, south through New England, Pennsylvania, and the Great Lakes states. Disjunct populations occur at higher elevations in the Appalachian Mountains. It is found in wetlands, marshes, and bogs for its larval host plant and adjacent upland areas for nectaring. Medium specialist: specialized lifestyle, but host and habitats are widespread.

It nectars at a large variety of flowering field plants including daisy, fleabane, dandelion, and hawkweeds.

### Phenology & Reproduction

Univoltine. The adults emerge in June and fly into July. Eggs are laid in a group on the host plant and young larva feed together under a silken web. Larva diapause at the third instar and overwinter at the base of the plant. They emerge in the spring and feed on young leaves of the host plant until pupation, emerging as adults in June.

Larvae are orange with transverse black stripes on each segment, and several rows of black branched spines. Sides may be mottled black. Has less black anteriorly and posteriorly than Baltimore Checkerspot. Harris' larva may mimic the toxic Baltimore larva to gain protection from predators.

It's only known larval host plant is flat-topped aster (*Doellingeria [Aster] umbellatus*)

*Chlosyne harrisii* larvae—this species has less black pigmentation anteriorly and posteriorly than the similar *Euphydryas phaeton*.



Tom Murray

*Chlosyne harrisii* larval colony in web enclosing flat-topped aster plant.



Karl Gardner

*Doellingeria umbellatus*



Brian Streets WVDNR

*Doellingeria umbellatus*



Pete Woods

## Eyed Brown (*Lethe eurydice*)



Matt Orsle

Matt Orsle

### Description

Dorsal—pale, warm brown with 10-11 black submarginal eyespots on each side; outer 1/3 of wings (especially FW) is paler than basal 2/3.

Ventral— Pale brown, lighter marginally and darker basally; paler with age and wear. Submarginal eyespots with white pupils on FW (four) and HW (six or seven). FW eyespots are similar in size, are typically touching (appearing like a chain), and contained within a pale patch. HW eyespots are larger than those on the FW, and are each concentrically ringed with dark brown, pale yellow, light brown, and pale yellow. On the HW, the postmedian line is jagged, and the post basal line has a characteristic inward pointing tooth near the costa.

The Appalachian Brown (*Lethe appalachia*) is a look-a-like and is generally darker. The primary difference is the Appalachian's smooth, undulating post median line on the ventral HW and lack of an inward pointing tooth on the post basal line. The Appalachian Brown also strays farther from sedges patches into woodland or area without wetlands.

### Range & Habitat

Distribution occurs from northern New England south to central Pennsylvania and New Jersey, and west into the prairie states. Habitat is open sedge meadows, edges of freshwater cattail marshes, slow streams, also sometimes open bogs, rarely drier meadows; it tends to stay within this primary habitat. Closely tied to open, northern sedge habitats. Medium specialist: closely tied to open, northern sedge habitats.

The adults feed on sap, bird droppings, and flower nectar.

### Phenology & Reproduction

Univoltine. The Eyed Brown's long single brood appears mid-June and flies to early September. Eggs are laid near the larval host plant and young crawl to the host plant after hatching. Larva diapause at the 3<sup>rd</sup> or 4<sup>th</sup> instar larva to overwinter. They feed again in spring on the host, pupate, and emerge in June as adults.

The larva is green with two green tails. Alternating dark and light green stripes line its body with the darkest line on the dorsal. Two red horns protrude the head.

The larval host are several species of sedge and rushes including *Carex lacustris*, *C. stricta*, *C. lupulina*, *C. rostrate*, *C. bromoides*, *C. trichocarpa*, and *Scirpus rubicosus*.

*Letho eurydice* larvae



Tom Murray

*Carex lacustris* meadow



Pete Woods

*Carex stricta* meadow



Elizabeth Byers WVDNR

*Carex stricta*



Jim Brighton MD Biodiversity Project

## Arctic Skipper (*Carterocephalus palaemon*)



### Description

Adult dorsal both – FW dark with squarish orange/yellow spots, spots mostly basal on HW, and a line of vague reddish spots along the FW margin.

Adult ventral both – HW is a warm orangish-brown with cream-colored spots outlined black. The spots can look white or silvery in different lights.

### Range & Habitat

Distribution occurs from northern New England south to northern Connecticut and Rhode Island and northwest New Jersey and eastern Pennsylvania and north-central New York; also western mountains in U.S. north into Alaska. It is confined to boreal habitats, but found in a variety of settings, probably on common grasses. It primarily uses openings and edges in forests, trail edges, and grassy areas along river or stream meanders in boreal habitats; also subarctic tundra in northern areas. Medium specialist: confined to boreal habitats, but found in a variety of settings, probably on common grasses.

### Phenology & Reproduction

Univoltine. Eggs are laid singly on the leaves of host grass plants between May and July. The larvae bind leaves from the host plant with silk to make a shelter. The mature larva overwinters in its leaf shelter and pupates in the spring.

The caterpillar is pale green with a white lateral stripe and 1-2 paler stripes below it; head green and round.

Hostplants are grasses with no specific reports in the study area. Reedgrass (*Calamagrostis* sp.) and brome (*Bromus* sp.) reported elsewhere.

*Carterocephalus palaemon* larvae



Tom Murray

*Calamagrostis canadensis*



Pete Woods

*Bromus kalmii*



Rick Rodich

## Long Dash (*Polites mystic*)

male



female



### Description

Dorsal male – FW orange with somewhat jagged wide brown border, *long jagged black line across wing* (inner portion is stigma); HW orange with dark veins and border

Dorsal female – FW dark brown with tawny leading edge, *large dark jagged diagonal line*, HW *strongly mirrors ventral pattern*

Ventral – HW yellowish orange with *submarginal band of yellowish blocky spots*, *basal yellowish patch*, *female with more contrast than male*

### Range & Habitat

Distribution from New England west across south central Canada to British Columbia, south through West Virginia to Virginia. This species is found in open marshy and wet meadow habitats, but will nectar in upland areas. Medium generalist: common and familiar, yet linked to moist meadow habitats in many localities.

It visits a variety of nectar sources including milkweeds, clovers, dogbane, and hawkweed.

### Phenology & Reproduction

Univoltine. Adults emerge in late May and fly through mid-July. It overwinters as third or fourth instar larva in a leaf shelter.

The larvae is dark brown mottled with dull white, with short black hairs rising from the black tubercles. A dark dorsal strip runs down the body from the black head.

Bluegrasses in the genus *Poa* are documented as the host plant, but other grasses may be used as well. No species are specifically documented.

*Polites mystic* larvae



Karl Gardner

*Poa alsodes* glade



Les Mehrhoff/www.DiscoverLife.org

*Poa compressa*



Jim Brighton MD Biodiversity Project

## Mulberry Wing (*Poanes massasoit*)



male



female



### Description

Adult dorsal both - FW Blackish-brown with small (sometimes absent) orangish (male) or whitish (female) spots in the median area; HW variably spotted.

Adult ventral both- HW rusty brown with large irregular yellow patch resembling a cross, veins yellow. Some rare males (form *suffusa*) may not have the irregular patch; FW with small bracelet near wing tip.

### Range & Habitat

Patchy distribution from Massachusetts south to Maryland along the coastal plain; also a disjunct population along the Great Lakes and northern plains.

Habitat is weedy, often low-growth wetlands with tussocks, such as sedge bogs, fens, marsh edges, and wet meadows (the latter usually with some standing water, not deep). Habitat specialist: seldom strays from chosen habitat.

### Phenology and Reproduction

Univoltine. Adults fly from late June or early July to mid-August<sup>2</sup>. Overwintering stage is unknown.

Host plant for larva is narrow-leaved Tussock sedge such as *Carex stricta*.

Adults feed on Swamp Milkweed (*Asclepias incarnate*), Common Milkweed (*A. syriaca*), Buttonbrush, and Narrow-leaved Mountain-Mint.

*Poanes massasoit* larvae

PHOTO PENDING PERMISSION

*Carex stricta* meadow



Elizabeth Byers WVDNR

*Carex stricta*



Jim Brighton MD Biodiversity Project

## Broad-winged Skipper (*Poanes viator*)



male



female



### Description

Adult dorsal – FW dark with a row of orange geometric spots; female spots are white especially towards the margin. HW with dark with orange long spots with a trailing scalloped pattern; more reduced on the female.

Adult ventral– HW pale brown to rusty-tan with long pale ray extending outward from the base. When worn, spots are visible above and below the stripe.

### Range & Habitat

Distribution occurs from coastal Maine south to northern Florida with increasing numbers of spottily distributed inland colonies; also along the Gulf coast to eastern Texas and around the Great Lakes. This species has increased in range and numbers due to the spread of it's larval host giant reed (*Phragmites australis*).

Two subspecies occur in the study area: *P. v. viator* rarely found in northern and western Pennsylvania, and *P. v. zizaniae* found along the coastal plain.

Broad-winged Skippers are primarily found in freshwater marshes and sedge meadows, but they will wander into upland areas in search of nectar. Medium generalist: formerly more specialized, but has spread widely with it's host, adapting to disturbed and pristine settings.

Nectar plants include swamp, common, and marsh milkweed, blue vervain, dogbane, thistles, buttonbush, and purple loosestrife.

### Phenology & Reproduction

Univoltine. Adults emerge from late June through early-August with peak in July. Caterpillars overwinter.

Caterpillars: Tan with faint whitish lateral stripes; head tan with a black vertical dash.

It's larval host of *P. v. zizaniae* is primarily giant reed (*Phragmites australis*), but also wild rice (*Zizania aquatica*), marsh millet (*Zizaniopsis milleacea*), and big cordgrass (*Spartina cynosuroides*). Various sedges (*Carex* sp.) are used by *P. v. viator*.

*Poanes viator* larvae



Karl Gardner

*Carex lacustris* meadow



Pete Woods

*Phragmites australis*



Pete Woods

## Delaware Skipper (*Anatrytone logan*)



male



female



### Description

Dorsal male – *bright, tawny orange with wide smooth dark brown borders, FW wing tip with dark veins and a J shaped mark at the cell end*

Female dorsal – *bright tawny orange with smooth wide dark brown borders, FW with a basal and cell end dark patch and with more extensive dark veining than the male*

Ventral both – *bright golden orange with matching veins*

### Range & Habitat

Distribution goes from southern Maine south to Florida, west to the Rockies and north-central Texas. It occurs in a variety of mostly wet grassy habitats including wet meadows, marshes, and bog and pond edges. Generalist: seldom abundant, but a widespread species that is extremely adaptable.

Delaware skippers nectar on a variety of especially white or pink meadow wildflowers including milkweed, clovers, buttonbush, and mints.

### Phenology & Reproduction

Univoltine (in WV). Larvae develop to a mid-instar stage and diapause for the winter. They reemerge in spring and feed until mature. After pupation adults emerge from late May through June.

The larvae is bluish-white covered with minute dark tubercles and a black crescent band near the anal plate. The head is white with a black margin and contains three dark stripes on the face.

Its larval host plants include big bluestem (*Andropogon gerardii*), switchgrass (*Panicum virginicum*), red-topped panic grass (*Panicum rigidulum*), and probably others.

*Anatrytone logan* larvae



M.J. Hatfield

*Panicum rigidulum*



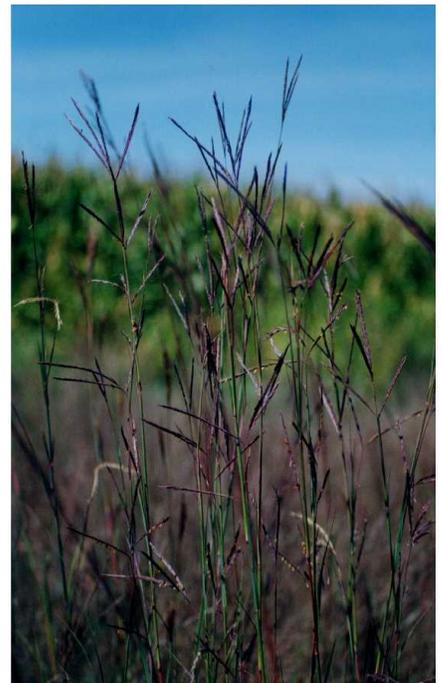
Susan Olcott WVDNR

*Andropogon gerardii* river scour prairie



Steve Grund PA Natural Heritage

*Andropogon gerardii*



Jennifer Anderson USDA-NRCS Plants Database

## Black Dash (*Euphyes conspicua*)



Fran Pope WV Butterfly Atlas

male



Susan Olcott WVDNR

female



www.jeffpippen.com

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### Description

Male dorsal – bright reddish orange FW, *wide and dark border, bold black stigma, HW dorsal pattern mirrors ventral*

Female dorsal – dark brown with *creamy wrist bracelet and diagonal row of creamy jagged spots, HW dorsal pattern mirrors ventral*

Dorsal both – *rich rusty brown, vague pale spot band widest at center, dark smudge basal to lowest spots*

### Range & Habitat

Distribution from Massachusetts west across southern Ontario to Minnesota and Nebraska, south to Iowa, and east to Virginia. It is found at wet marshy areas and wet meadows where sedges are abundant. Medium specialist: mostly stays close to chosen habitat.

Several flowering plants are visited for nectar including swamp milkweed, ironweed, joe-pye weed, and thistle.

### Phenology & Reproduction

Univoltine. Adults emerge in late June and fly through July and into August. It overwinters as a second or third instar larva.

Its larval host plants include tussock sedge (*Carex stricta*) and hairy-fruited sedge (*Carex trichocarpa*).

The larvae is dark green with wavy longitudinal fine white lines. The head is brown with cream colored bands and a black oval ringed in white or cream in the center of the forehead.

*Carex stricta* meadow



Elizabeth Byers WVDNR

*Carex stricta*



Jim Brighton MD Biodiversity Project

*Carex trichocarpa* meadow



Elizabeth Byers WVDNR

*Carex trichocarpa*



Brian Streets WVDNR

## Dion Skipper (*Euphyes dion*)



male



female



### Description

Male dorsal—bright reddish orange FW, wide and dark border, long black stripe ending in a hook near the apex, HW dorsal pattern mirrors ventral

Female dorsal—dark brown with a two wrist spots and a diagonal row of creamy jagged spots, HW dorsal pattern mirrors

Ventral both— light red-brown or brown-orange with two broad light yellow streaks running from the base to the margin.

### Range & Habitat

Distribution occurs from southern Canada east in a band across central New York and southern New England south on the coastal plain to northern Florida, along the Gulf Coast to east Texas, north along the Mississippi River to the Great Lakes. Scattered populations occur inland in Georgia, the Carolinas, and Virginia.

Habitats are open freshwater wetlands, marshes, swamp edges, bogs, and fens; sometimes in brackish wetlands. Northern colonies use calcareous fens, whereas southern populations prefer bogs and other acidic wetlands. Dion Skippers are seldom found far from suitable habitat. Medium specialist: uses widespread host plants, yet limited to small colonies with low population density, often in niche habitat; difficult to classify.

### Phenology & Reproduction

Univoltine from New Jersey north (the study area); two or three broods in the south. In the northern area adults fly from July through August. Uses widespread hostplants, yet limited to small colonies with low population density, often niche habitats.

Larval host plants include various sedges (*Carex lacutris*, *C. stricta*, others) and rushes (*Scirpus cyperinus*).

Nectars on milkweeds, button-bush, pickerelweed, etc. Medium specialist - difficult to classify in specialist/generalist terms.

*Euphyes dion* larvae



W. Lukey

*Carex lacustris* meadow



Pete Woods

*Carex stricta* meadow



Elizabeth Byers WVDNR



Jim Brighton MD Biodiversity Project

## Two-spotted Skipper (*Euphyes bimaculata*)



Karen Willard

male



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www.jeffpippen.com

female



Karen Willard

### Description

Male dorsal – brown with variable orange field around crooked black stigma, tawny leading edge

Female dorsal – Brown with tawny leading edge, *three square creamy dots diagonally across wing*, small orange wrist bracelet

Dorsal both – unmarked brownish orange to dull brown (with wear) with *pale veins*, *strong white line along inner HW margin parallel to body*

Note – when fresh body underparts snowy white, white fringe on wings

### Range & Habitat

Distribution from New England west across southern Ontario and Great Lakes states to Minnesota, Iowa, and Nebraska, east to Pennsylvania and West Virginia, then south along the coastal plain to Georgia. A disjunct population occurs in Colorado and Kansas.

The Two-spotted Skipper prefers wet, sedge meadows, marshes, and bogs most often associated with woodland edges. Medium specialist: although extremely local, habitat and host plants are not especially strict.

It nectars at a variety of wetland and other flowering plants including swamp milkweed, ironweed, spirea, and maleberry, and may stray to adjoining habitats to find nectar.

### Phenology & Reproduction

Univoltine in north, two in the south. In the north, adults appear in June and fly through July. It overwinters as a third or fourth instar larva.

The larvae is pale green with a dark dorsal stripe. The head is chestnut brown, ridged toward the rear, and has a dark chestnut band around its edge. A black oval ringed with white is in the center of the forehead.

Its larval host plants include tussock sedge (*Carex stricta*) and hairy-fruited sedge (*Carex trichocarpa*).

*Euphyes bimacula* larvae



Karl Gardner

*Carex stricta* meadow



Elizabeth Byers WVDNR

*Carex stricta*



Jim Brighton MD Biodiversity Project

*Carex trichocarpa* meadow



Betsy Leppo Western PA Conservancy

*Carex trichocarpa*



Brian Streets WVDNR

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