

Butterflies of Virginia

County Distribution

Compiled and edited
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The goal of the present checklist is to maintain an accurate record of butterfly distribution records by county or independent city (equal to county status). Butterfly records are obtained from all available published and internet sources, including private and institutional collections. Please direct any specific inquiries regarding records, or report any discrepancies or apparent errors directly to me.

On the checklist, a shaded **X** indicates a county record that has been confirmed by either photo, specimen, or confirmed first-hand by a reputable lepidopterologist or experienced naturalist. An **X** without shaded background indicates a record based on a sight report, old literature records which do not clearly indicate how a butterfly was verified; or from various summary lists without supportive documentation. The ultimate goal is to upgrade all **X** reports to **X!!** I will include all new county and independent city records in a quarterly summary to be published in the Virginia reports section of the Southern Lepidopterists' News.

If you wish to report any new butterfly County or City records, the best way is to establish accounts with iNaturalist, Butterflies and Moths of North America (BAMONA), or the North American Butterfly Association (NABA 'Sightings' page, for which you need to be a paying member) and post photographs of either mounted specimens or live individuals at any of these sites. For sight records, NABA Sightings or eButterfly accept sight reports. You can also simply send sight reports to me in any style or format, either by mail or e-mail to: Harry Pavulaan, 606 Hunton Place NE, Leesburg, VA, 20176. Email: intlepsurvey@gmail.com (if expecting a reply, please be patient, same day replies are generally not possible). Photographs are best sent by email attachment.

New butterfly County and Independent City records should always be positively identified by photographs. Please review your photos to avoid odd angles, blurry images, distant shots or poor lighting which makes identification difficult or impossible. Sight reports of common or easily-identified species will be accepted, but some may be scrutinized by subsequent inquiry. If you feel you have observed something unique and distinct, but cannot identify it, a detailed description and other observations may suffice.

Always remember to include data. Your reports need to include the location (at minimum, the county or independent city). Keep reports accurately within established boundaries. I have received many reports from "Alexandria" which are really in Fairfax County. Locations such as "Shenandoah National Park" are fairly useless unless one includes the confirmed county or the mile marker. The photo or sighting date is equally important. Summary county or park lists without dates may be acceptable if they fill large distributional gaps. Confidentiality of reporting is occasionally a concern. Reporting by county or city is

usually general enough to maintain secrecy of your favorite spots. Reports for existing county/city records are encouraged, as many of the present records are historic. Contributors might also consider using their real names when establishing accounts. Fictitious monikers are recorded as “anonymous” since there is no way to know who contributed a county, state or U.S. record.

A note about species names: The last pages (“F” pages) provide important information:

Column 1: Common Names generally follow the NABA ‘Checklist & English Names of North American Butterflies’ last published in 2001 (and never updated except for a handful of Mexican species recorded in the U.S. after 2001)! There have been a considerable number of changes to butterfly taxonomy since 2001. Several new species have been described since 2001. Also NABA (2001) did not recognize many species which are generally accepted by the lepidopterological community. Several species are members of “species complexes” whose natural history is little known (Little Wood Satyrs are one example). Thus, there are several cases of deviation from the NABA list. These are explained in the ‘Notes’ section that follows below.

Column 2: Scientific (Latin) Names generally follow ‘A Catalogue of the Butterflies of the United States and Canada’ (Pelham, 2019 update from the Butterflies of America website). Currently, there are additional changes not yet reflected in the Catalogue (Zhang, et. al., 2019) and some minor deviations per H. Pavulaan, as explained in the ‘Notes’ section that follows below.

Column 3: The species’ entry number from Pelham (2019) is included so that users may cross-reference the Catalogue for more detailed information regarding butterfly names and taxonomic issues.

Column 4: Lastly, Scientific (Latin) Names per NABA (2001) are included for **cross-reference purposes only** primarily because many people who are observing and photographing butterflies utilize NABA butterfly names as reflected in Glassberg (1999, 2017) which are, in turn, based on NABA (2001). NABA (2001) is based on dated scientific names taxonomy (while, ironically, common names have remained reasonably stable due to the adoption of NABA common names by many of today’s book authors and local butterfly groups). The Lepidopterists’ Society has adopted Pelham (2008, with updates through 2019) as their “official” source of updated butterfly taxonomy.

Notes on the names applied in this list:

- *1 *Achalarus lyciades* revised to *Cecropterus lyciades* (Li, et. al., 2019; Pelham, 2019).
- *2 *Thorybes confusis* revised to *Cecropterus confusis* (Li, et. al., 2019; Pelham, 2019).
- *3 *Thorybes bathyllus* revised to *Cecropterus bathyllus* (Li, et. al., 2019; Pelham, 2019).
- *4 *Thorybes pylades* revised to *Cecropterus pylades* (Li, et. al., 2019; Pelham, 2019).
- *5 *Autochton cellus* revised to *Telegonus cellus* (Li, et. al., 2019; Pelham, 2019).
- *6 *Erynnis juvenalis* revised to *Gesta juvenalis* (Zhang, et. al., 2019a. 2019b).
- *7 *Erynnis horatius* revised to *Gesta horatius* (Zhang, et. al., 2019a. 2019b).
- *8 *Erynnis martialis* revised to *Gesta martialis* (Zhang, et. al., 2019a. 2019b).
- *9 *Erynnis zarucco* revised to *Gesta zarucco* (Zhang, et. al., 2019a. 2019b).
- *10 *Erynnis funeralis* revised to *Gesta funeralis* (Zhang, et. al., 2019a. 2019b).
- *11 *Erynnis baptisiae* revised to *Gesta baptisiae* (Zhang, et. al., 2019a. 2019b).
- *12 *Erynnis lucilius* revised to *Gesta lucilius* (Zhang, et. al., 2019a. 2019b).
- *13 *Erynnis persius* revised to *Gesta persius* (Zhang, et. al., 2019a. 2019b).

*14 *Pyrgus communis* revised to *Burnsius communis* (Grishin, 2019; Li, *et. al.*, 2019; Pelham, 2019).

*15 *Pyrgus albescens* revised to *Burnsius albescens* (Grishin, 2019; Li, *et. al.*, 2019; Pelham, 2019).

*16 *Copaeodes minimus* revised to *Oarisma minima* (Zhang, *et. al.*, 2019a. 2019b).

*17 *Polites origenes* revised to *Limochores origenes* (Zhang, *et. al.*, 2019a. 2019b).

*18 *Polites mystic* revised to *Limochores mystic* (Zhang, *et. al.*, 2019a. 2019b).

*19 *Polites vibex* revised to *Hedone vibex* (Zhang, *et. al.*, 2019a. 2019b).

*20 *Problema bulenta* revised to *Atrytone bulenta* (Zhang, *et. al.*, 2019a. 2019b).

*21 For the purposes of this list, *Euphyes bimacula* is listed along with two subspecies: nominotypical subspecies *bimacula* which occurs in the mountainous portion of western Virginia; and subspecies *arbogasti*, which occurs in the coastal plain region. NABA (2001) does not list subspecies for *E. bimacula*.

*22 Treatment of *Heraclides* at either the level of genus or subgenus has remained subjective for well over a century. More recent studies remain inconclusive on proper placement of *Heraclides* as either genus or subgenus. For example, Miller & Brown (1981) treated *Heraclides* at genus level, while Pelham (2019) treats *Heraclides* as a subgenus of *Papilio*. NABA (2001) recognized only genus *Papilio* for members of *Heraclides*. The present list opts to follow Tyler, *et. al.* (1994), and Lamas (2004) which place *Heraclides* at genus rank.

*23 Treatment of *Pterourus* at either the level of genus or subgenus has remained subjective for well over a century. More recent studies remain inconclusive on proper placement of *Pterourus* as either genus or subgenus. For example, Miller & Brown (1981) treated *Pterourus* at genus level, while Pelham (2019) treats *Pterourus* as a subgenus of *Papilio*. NABA (2001) recognized only genus *Papilio* for members of *Pterourus*. The present list opts to follow Tyler, *et. al.* (1994), and Lamas (2004) which place *Pterourus* at genus rank.

*24 *Pterourus appalachienis* was described in 2002, thus not listed in NABA (2001).

*25 The treatment of *Pyrisitia* at either the level of genus or subgenus has remained subjective for many decades and has flipped back and forth repeatedly. NABA (2001) recognized only genus *Eurema* for members of *Pyrisitia*. Most recently, Lamas (2004) and Pelham (2019) treat *Pyrisitia* at the rank of genus. Zhang, *et. al.* (2019a. 2019b) resolved this question through extensive genomic analysis and proposed retention of *Pyrisitia* at full genus rank.

*26 The treatment of *Abaeis* at either the level of genus or subgenus of *Eurema* has remained subjective for many decades and has flipped back and forth repeatedly. NABA (2001) recognized only genus *Eurema*. Most recently, Lamas (2004) and Pelham (2019) treat *Abaeis* at the rank of genus. Zhang, *et. al.* (2019a. 2019b) resolved this question through extensive genomic analysis and proposed retention of *Abaeis* at full genus rank.

*27 Though Appalachian populations were recently described as subspecies *carolae* (Hammond & McCorkle, 2017), the authors reclassified all *Colias interior* subspecies as subspecies of *Colias pelidne*. This view has not been accepted by the lepidopterological community. Pelham (2019) retained *Colias interior*, and Zhang, *et. al.* (2019) demonstrated support for retaining *Colias interior* as separate from *Colias pelidne*. The present list follows Pelham (2019).

*28 The treatment of *Zerene* at either the level of genus or subgenus has remained subjective for well over a century and has flipped back and forth repeatedly. NABA (2001) recognized only genus *Colias* for members of *Zerene*. Hammond & McCorkle (2017) treated *Zerene* as a subgenus of *Colias*. Most recently, Lamas (2004) and Pelham (2019) treated *Zerene* at the rank of genus. Zhang, *et. al.* (2019a. 2019b) resolved this question through extensive genomic analysis and demonstrated considerable distance between *Zerene* and *Colias* at genus rank.

*29 *Callophrys* has gained “popular” application as a super-genus encompassing several genera in recent years, despite several studies supporting retention of traditional genera. This first became evident when Scott (1986) applied *Callophrys* in place of traditional genera *Incisalia*, *Mitoura* and others, without explanation or reference. This treatment was followed by Opler & Warren (2003), and Lamas (2004) again without explanation. The present list follows traditional treatment of *Incisalia* and *Mitoura* at generic rank (Miller & Brown, 1981; Hodges, 1983; Ferris, 1989). A recent study (Zhang, *et. al.*, 2019) showed close relationships between genera but members of *Incisalia* and *Mitoura* break out as separate groupings calling for detailed analysis and resolution.

*30 This list records both *Baptisia* and *Lupinus* feeding populations separately in support of future studies. These currently bear no taxonomic standing.

*31 This list records locations for both subspecies *henrici* and *viridissima* separately. The common name ‘Greenish’ Henry’s Elfin comes from local usage in the region where ssp. *viridissima* occurs. Ssp. *viridissima* occurs mainly in the Tidewater region (and Delmarva Peninsula), where it is dominant, but individuals bearing green ventral dusting may occur far inland, mainly immediately west of Chesapeake Bay and the Potomac River. Some individuals resembling *viridissima* may frequently occur as far north as the Washington D.C. suburbs. Observers are encouraged to note green “highlights” in Henry’s Elfin and report them.

*32 The species *Celastrina lucia* has come to be accepted at species rank in recent years by most authors, in regions where the species occurs. It is distinct from *C. ladon* (which is identified by a unique wing scale structure). NABA (2001) and Glassberg (1999, 2017) do not recognize this taxon. Pavulaan (2014) discusses separation of several *Celastrina* taxa in Virginia at species rank. Pelham (2019) lists two subspecies, of which *C. lucia lucia* occurs in eastern North America.

*33 The species *Celastrina ladon* has been determined to be a distinct Appalachian/Ozarkian region endemic, identified by a unique wing scale structure that separates it from all other eastern *Celastrina* species. This is discussed at length in Pavulaan (2014). NABA (2001) subsumes several species within *C. ladon*. Pelham (2019) separates *C. ladon* from other taxa in this genus. The name “*violacea*” is a junior synonym and applies only to typical *C. ladon*.

*34 The species *Celastrina idella* has been determined to be distinct from *C. ladon* (which is identified by a unique wing scale structure). NABA (2001) considered *idella* to represent a subspecies of *ladon*, though both are fully sympatric and occur together throughout the range of *C. idella* (sympatric taxa are not considered by biologists to be subspecies). The common name “Holly Azure” was originally proposed (Wright & Pavulaan, 1999) and most authors and websites have adopted this common name. However, NABA (2001) refers to it as ‘Atlantic’ Spring Azure and while Glassberg (1999) provides brief mention as ‘Pine Barrens’ Spring Azure, Glassberg (2017) does not recognize this taxon.

*35 The species *Celastrina serotina* has been determined to be distinct from *C. ladon* (which is identified by a unique wing scale structure). The species was officially described in 2005, though there were numerous references to “Cherry Gall Azure” in literature just prior to that (see Glassberg, 1999). Thus it is not listed in NABA (2001). Glassberg (2017) do not recognize this taxon, while most authors accept this as a full species, in regions where the species occurs. The common name “Cherry Gall Azure” was originally proposed (Pavulaan & Wright, 2005) and is widely used.

*36 The species *Celastrina neglecta* has been determined to be distinct from *C. ladon* (which is identified by a unique wing scale structure). This is discussed at length in Pavulaan (2014). In recent years, *neglecta* has come to be accepted at species rank by most authors. Glassberg (1999) referred to it as *Celastrina ladon neglecta* (Summer Azure). NABA (2001) considered *neglecta* to represent a subspecies of *ladon* (with the common name ‘Summer’ Spring Azure), though both are fully sympatric and occur together throughout the range of *C. ladon* (sympatric taxa are not considered by biologists to be subspecies). Glassberg (2017) does not recognize *neglecta* at any rank and subsumes it into *C. ladon*. Pelham (2019) separates *C. neglecta* from *C. ladon*. The common name is correctly “Summer Azure”.

*37 The genus *Everes* has traditionally been applied to North American “Tailed Blues”. In recent years, the genus name *Cupido* has gained popular usage. This use of the name *Cupido* for the Eastern-tailed Blue originates with an elusive list of European butterflies that apparently was never published! However, I have found no actual studies showing that *Cupido* is the correct generic name to apply to our sole member of the genus: *Everes comyntas*. Thus, I retain the genus name *Everes*.

*38 The species name *Libytheana bachmanni* has traditionally been applied to the butterfly known as the “American Snout”. In recent years, the name *L. carinenta* has gained popular usage (with *bachmanni* considered a subspecies of *carinenta*). I have attempted to find an actual study showing this to be the case but such study eludes me. Thus, I retain the status of *L. bachmanni* as a full species.

*39 The familiar Monarch butterfly is known for its migratory behavior. The nominotypical, migratory subspecies *Danaus plexippus plexippus* occupies the entirety of the North American mainland. However, a sedentary population exists in the Caribbean region, adjacent to Florida, with the subspecies name *D. plexippus megalippe*. The Monarch population of southern Florida variably takes on phenotypical characters of *megalippe* and is fully sedentary. Whether this population is actually *megalippe*, or a blend population, calls for more detailed study. In any event, some Monarch individuals observed in Virginia display some of the characteristics of *megalippe*. However, since these are of migratory nature, they may likely be hybrids or simply *megalippe*-like variants of nominotypical *plexippus*. Thus, an entry for *megalippe* is included in the list. There is no published common name, thus I have adopted the name “Caribbean Monarch”.

*40 *Agraulis vanillae* revised to *Dione vanillae* (Zhang, et. al., 2019a, 2019b).

*41 NABA (2001) created the common name “Red-spotted Admiral” as an “imperfect solution” for providing a name for the SPECIES *Limenitis arthemis* while maintaining the subspecies common names “White Admiral” for subspecies *artemis* and “Red-spotted Purple” for subspecies *astyanax*. Observers are encouraged to use the subspecific common names for reporting either subspecies in Virginia, instead of the SPECIES name “Red-spotted Admiral”. The Red-spotted Purple is the dominant form in Virginia. White Admirals only appear as rare variant forms, mostly in the mountainous western region of the state. [It is important to note that the practice of reporting the species name Red-spotted “Admiral” in some regions of our country, such as in New England, where both forms are equally present, actually masks diversity in the species, and it is not known which subspecies is being reported.]

*42 The Viceroy (*Limenitis archippus*) consists of several subspecies continent-wide. NABA (2001) and Glassberg (2017) only recognize *L. archippus* at species-level and do not recognize the distinct named subspecies. This list follows Pelham (2019), which lists all known subspecies. Three of these occur in Virginia, but only subspecies *archippus* is dominant throughout the state, with the only exception being the occurrence of subspecies *watsoni* in the far southeastern corner of the state, mainly east of the Great Dismal Swamp. Nominotypical *archippus* is uniformly orange on the upper wing surface. Subspecies *watsoni*, while having orange hindwings, is characterized by having darkened forewings. It is the dominant subspecies in the Gulf states. *Watsoni* also appears as a seasonal “form”, usually during exceptionally hot, dry summer weather, in many parts of Virginia, as far north as the Washington D.C. suburbs. Thus, one might conclude that Virginia *watsoni* is not truly the same as the Gulf Coast subspecies. The third phenotype is *floridensis*, in which both sets of wings are darkened, often reddish dark brown. This occurs rarely in Virginia but mainly as an aberrant seasonal form, generally later in summer. It is the dominant form in Florida and along the immediate Carolina coast, but can rarely be found in diluted form as an extreme variant, as far north and inland as the Washington D.C. suburbs. For those familiar with the work of Clark & Clark (1951), the authors refer to “*floridensis*” in southeastern Virginia, but they are describing the *watsoni* phenotype. The authors consider the Floridian subspecies as *L. archippus eros*, which is a junior synonym of *floridensis* (Pelham, 2019).

*43 See Pelham (2019) for update on the correct scientific name: *N. l-album j-album*. The name has varied somewhat over recent decades. However, NABA (2001) and Glassberg (2017) apply the dated name “*vaualbum*” (or “*vau-album*”) no longer in use by the scientific community.

*44 Recent (yet unpublished research) has determined that North American *N. antiopa* differs considerably from Eurasian *N. antiopa antiopa*. Two named, distinct subspecies occur in North America. Those in the eastern U.S. are subspecies *lintneri*. Added to this list as the Virginia subspecies.

*45 Recent (yet unpublished research) has determined that Baltimore Checkerspot populations from about Maryland southward are represented by the subspecies *schausi* (considered a junior synonym of subspecies *phaeton* in Pelham, 2019). This subspecies is characterized by large size and is darker than more northerly populations). Thus, *schausi* is added to this list as the Virginia subspecies.

*46 The Northern Crescent has undergone a considerable number of scientific name changes since populations were discovered in the central Appalachian mountains. In the literature, it was listed as: *P. pascoensis* (Opler & Krizek, 1984); *P. selenis selenis* (Allen, 1997); *Phyciodes selenis* (NABA, 2001; Glassberg, 1999, 2017). It is currently known as *Phyciodes cocyta* (see Pelham (2019) for names updates) and the Virginia subspecies is *P. cocyta selenis*. To complicate matters, in Virginia there are two different population groupings: the first being a bivoltine taxon which flies in May and August; and the second being a univoltine taxon which flies only in late June and early July. These are differentiated mainly by the timing of their brood flights. Males of the *Phyciodes cocyta* “species complex” are differentiated from males of the Pearl Crescent (*Phyciodes tharos*) by the UNDERSIDES of the male antenna clubs. There is no other way to differentiate species in these two groups. Pearl Crescent males have solid BLACK antenna clubs, generally spoon-shaped. Northern Crescent males have the underside of the antenna clubs ORANGE in color, and the clubs tend to be elongated. Female antenna clubs of both species have variable clubs. Thus, the females cannot be identified to species other than by association with identified males. There are behavioral and habitat-association differences as well, but one needs to carefully observe and study these butterflies very carefully.

*47 See Pelham (2019) for explanation regarding priority of *Lethe* over *Enodia* and *Satyrodes*.

*48 The Little Wood Satyr is now believed to consist of a sibling-species pair. The earlier, spring flight, generally flying in May, has been proposed to be *Megisto eurytris* (Gatrelle, 2005). The later, summer flight, generally flying in late June and early July, retains the name *Megisto cymela*. This species relationship has been partly verified by rearing studies conducted by myself. Eggs laid by *M. eurytris* produce caterpillars that do not mature until September, which then go into hibernation until the following year, producing the next year’s spring flight. Thus the spring flight cannot produce the summer flight of the same year. Similarly, *M. cymela* caterpillars do not mature the same year, rather going into hibernation as partly-developed caterpillars, then completing growth the following year and producing the next year’s summer flight. *M. eurytris* is generally common and widespread statewide, while *M. cymela* is less common, less widespread, and usually only found in isolated colonies. Observers are advised to be attentive of the two flights when reporting either the spring flight (*eurytris*) or summer flight (*cymela*).

*49 The Georgia Satyr is now believed to consist of a sibling-species pair. Gatrelle (1999) elevated the name *helicta* to represent populations of a *Neonympha* sibling-species with phenotypic wing differences from *N. areolata*. These two species are differentiated primarily by the shape of the markings on the underside of the hindwing. The Georgia Satyr (*N. areolatus*) has elongated markings, while the Helicta Satyr (*N. helicta*) has markings that are rounded, or shaped egg-like. It might be noted that *helicta* appears very similar to Mitchell’s Satyr (*N. mitchelli*). *N. mitchelli* has a set of rounded marks on both sets of wings, while *N. helicta* generally has rounded marks only on the hindwings, but in some *helicta* individuals there may be rounded marks on the forewings as well, thus making determination from *mitchelli* tricky, though both these species occupy vastly differing distributional patterns. Observers are encouraged to provide photographic (or specimen) documentation of both *N. areolatus* and *N. helicta* and to report associated habitat so that we might better understand the life history of this species pair. Pelham (2019) subsumes *N. helicta* into *N. areolatus* as a junior synonym.

*50 The Common Wood-Nymph (*Cercyonis pegala*) consists of many subspecies continent-wide. Several named subspecies occur in the eastern United States, three in Virginia, though Pelham (2019) does not accept ssp. *carolina* and incorrectly lists it as a form of ssp. *pegala*. NABA (2001) and Glassberg (1999, 2017) do not accept any named subspecies. The three Virginia subspecies are as follows:

- (1) *pegala* – This is the large, dark brown subspecies which occurs mainly in the Virginia Tidewater region. Males are characterized by having primarily only one eyespot mark set in a deep-orange forewing patch. Females attain considerable size.
- (2) *alope* – This is a smaller subspecies which occurs mainly in northern Virginia. It is similar to ssp. *pegala* except males bear two equal-sized eyespots within a deep-orange forewing patch.

- (3) *carolina* – This subspecies resembles ssp. *alope* except the ground color is more of a pale, or grayish-brown tone and the forewing patch is pale-yellow or cream white. Males bear two eyespot marks. It occurs mainly in the western portion of the state in the mountainous region, as far north as northern Virginia, where most adults have the pale-yellow patch, with some intergradation to ssp. *alope*.
- (4) Throughout the vast interior of the state, populations tend to be polytypic, and blend between the above three. These cannot reliably be assigned to either of the three subspecies. In rare cases, individuals in the mountain region will have the forewing eye patch faded, showing intergradation to the northern subspecies *nephele*.

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