

## Updated Distributional Checklist of Virginia Butterflies

The first edition of 'Butterflies of Virginia' (dated January 1, 2020) is now available for download at the Butterfly Society of Virginia website. It is formatted to be printed as individual pages and can be stapled for convenient use. This is the product of a half-year of research to accurately assess our current knowledge of butterfly distributions in Virginia. The goal of the checklist is to maintain an accurate record of butterfly records by county or independent city. The status of individual butterfly records is shown as either "verified" (documented) or "unverified" (undocumented). As coordinator, I maintain a working database, which identifies the sources of each record, but not details of the data.

Many published and online resources were investigated for this first edition. Sources were: Butterflies and Moths of North America (BAMONA), eButterfly, iNaturalist, NABA Sightings, Bug Guide, Facebook groups, Paul Opler's Eastern Butterfly Atlas project, Season Summary of the Lepidopterists' Society, quarterly summaries of the Southern Lepidopterists' News, NABA 4<sup>th</sup> of July Count reports, and published literature records. To meet my personal goal of a Jan. 1 release, I have not yet reviewed many years of sight reports in the valeps@yahoo.com discussion group and several hundred pages of personal correspondence. These additional sources have yet to be reviewed for additional records to add to the next edition and requiring several more months of review. Records entered into the present checklist were not accepted verbatim from the above sources, but were scrutinized and analyzed for accuracy, corroboration and method of documentation. Many misidentifications were found in all sources, requiring a significant amount of feedback on my part to correct the record (unfortunately, not all of these resources have the means for users to suggest corrections).

A useful tool in the Checklist are the numbered "F" pages which give you the popular Common Name and current scientific (Latin) name per the Pelham (2019) Catalogue. Some scientific names are updated from recently published research (see the Bibliography section) and most are not yet published in the newest field guides. For those using the NABA 2001 Checklist, or Jeff Glassberg's Butterflies Through Binoculars or Swift Guide books, I have included an additional column cross-referencing NABA (2001). For those interested in verifying details of butterfly names, I have included a column for the Pelham (2019) Catalogue, which shows the species' number for quick reference. The link to the Pelham Catalogue is in the column header. [NOTE: the Pelham Catalogue will have a 2020 update so there will be additional name changes and many of the reference numbers will be changed, but searching on the listed numbers puts you within a name or two of the "old" names.]

You can help! When you find a butterfly in a county (or independent city) that is missing a record for that butterfly, please report it so it can be added! You can report new county records to any of the above listed sources. All require you to establish an account or membership to participate. Facebook groups such as "Butterflies of the Eastern United States" (as well as other Facebook groups) are the quickest, easiest way to post photos. When posting new butterfly records, please always include DATE and LOCATION.

This is of utmost importance. New records of live or collected specimens should always be documented with a photograph to be considered “verified”. Some groups accept sight records but without documentation, sight records are generally considered “unverified” (there are a few exceptions to this rule). An alternative is to send records directly to me (contact information in the Checklist) and I will include them in my quarterly summaries to the Southern Lepidopterists’ News.

Before submitting any new records, PLEASE consult the listed online resources (above) or various field guides and see if you can identify the butterfly yourself. Often, some species are difficult to identify, thus posting to the online resources (or emailing/ mailing photographs directly to me) will solicit community input and your butterfly will ultimately be identified. The best field guides are:

Butterflies Through Binoculars – the East, by Jeffrey Glassberg. Please note that butterfly scientific names are keyed to the 2001 NABA Checklist and some are now outdated. See the last column in the Checklist for cross-referencing names.

A Swift Guide to Butterflies of North America, by Jeffrey Glassberg. Names are also keyed to the 2001 NABA Checklist.

Kaufman Field Guide to Butterflies of North America, by Jim Brock & Kenn Kaufman. More current than the NABA-keyed guides. Make sure you have the second edition with the Red Admiral on the cover!

A Field Guide to Eastern Butterflies (Peterson Field Guides), by Paul Opler & Vichai Malikul. Another mainstay, still my favorite, loaded with information; but the maps make this guide especially valuable. Use it to determine if a species is within range or possibly a stray worth reporting.

National Audubon Society Field Guide to North American Butterflies, by Robert Pyle. Though somewhat dated for several scientific names, special mention goes to this guide as our first North American field guide showing living butterflies in their natural poses. Gorgeous photographs serve to help verify those tough calls.

The Butterflies of West Virginia and Their Caterpillars, by Thomas Allen. Very informative and some excellent images of mounted specimens to use for comparative purposes. Note also, some species scientific names are outdated but still a very useful reference for Virginia butterflies.

My own preference is to have copies of ALL these field guides and I suggest the same for anyone with a more serious interest in butterfly identification. Most are available as used copies on Amazon.com or Ebay for considerably less than purchasing them new. Additional recent field guides for states such as Pennsylvania, Indiana and Illinois are also excellent for identification purposes since the butterfly fauna of those states is mostly the same as for Virginia. For those with a serious interest in butterflies beyond just identification, I highly recommend adding these to your library:

The Butterflies of Virginia, by Austin Clark & Leila Clark. Though dated (1951) for scientific names, this is the most thorough and comprehensive guide on the butterflies of our state. The Clarks spent many years crisscrossing the state to observe and document butterflies. Details of butterfly natural history are extensive and reasonably accurate, but for some species, we have made many new discoveries. Regardless, if you have a serious interest in Virginia butterflies, this guide is a MUST. Long out of print, decent used copies are still occasionally offered on Amazon.com or Ebay. However, you can download a pdf copy for free from the Smithsonian Miscellaneous Collections website at: <https://library.si.edu/digital-library/book/smithsonianmiscel1161952smit> Locating this gem online is a little tricky, as you know how website URL's work for one person but not for the next. This link should get you to Vol. 116. Scroll down 11 (or so) pages to make sure you see the "Contents" page. Issue number 7 should appear at the bottom of the page. If you see this, navigate down until you see the title page. You might need to download and save the entire volume, but you'll need to figure out your best way to just save No. 7, depending on which pdf management program you use. With Adobe, you can just mass-delete what you don't need to save.

The Butterflies of North America, a Natural History and Field Guide, by James Scott. Used primarily as a reference source, the scientific names are somewhat outdated and Scott made up many of his own unique common names. However, the biological information (esp. hostplant listings) associated with this guide will be indispensable for a generation to come. This reads like a college textbook (unfortunately, the title "Field Guide" is a misnomer because it is way too large and heavy to lug around in the field. Take it with you but leave it in your car.) The paperback version is cheaper as used copy on Amazon or Ebay, but I believe you might be able to get a Kindle version now.

Butterflies of the East Coast, an Observer's Guide, by Rick Cech & Guy Tudor. This is a gem among butterfly guides; now apparently out of print but still widely available on Amazon.com or Ebay. The listed price of used copies is often on the high side but occasionally a used copy is offered for the around original sale price. This guide is written in a very readable, enjoyable style and is excellent for planning purposes. It also shows images of habitats and hostplants.

Butterflies East of the Great Plains, by Paul Opler & George Krizek. Long out of print, but used copies are still available online for a reasonable price. This guide is loaded with useful natural history information for each species and was the first to illustrate accurate range maps (to 1984). Gorgeous photographs as well! Also still one of my favorites.

Lastly, either version of: The Audubon Society Handbook for Butterfly Watchers (1984) (or) Handbook for Butterfly Watchers (1992), by Robert Pyle. If you have any level of interest in butterflies, this book covers it all, and is an absolute must. Pyle has an amazing writing style as an educator and brings together an understanding of all aspects of avocational butterfly study. Unlike the field guides, this is a book you read from beginning to end and then use it as a reference source going forward.

It is important to keep in mind that there have been a great many changes in butterfly scientific (Latin) names in recent years, most due to exhaustive research by experts in particular butterfly groups, and most supported by mtDNA research. Some of these name changes may be confusing, even to the distress of those who have favorite groups and have used the same scientific name for decades. But one must remember that scientific names have gone through innumerable changes over the past two centuries. In most cases, we had it wrong all along and recent genetic studies have revealed the true relationships of butterflies. A “Notes on the names applied in this list” will explain many changes and comments on pending research. There are a number of species “complexes” such as the Little Wood Satyr which consist of two or more cryptic species but research is pending. At least most common names remain unchanged, despite scientific name changes.

Good luck in 2020. Harry Pavulaan, 606 Hunton Place, Leesburg, VA. 20176