NORTH AMERICAN BUTTERFLY ASSOCIATION



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ANNUAL NABA BUTTERFLY COUNT - INSTRUCTIONS (USA)

This printed count forms is for field use *only*. All counts must submit their results using the <u>online data entry system</u>. Please contact the <u>NABA Count Program</u> if you have questions or concerns.

Please report your count results directly to NABA through our online count form at www.butterflycounts.org. The online form allows compilers to enter all data for their counts through the Web and also allows the regional editors to review and edit the reports efficiently. Most importantly, Butterfly Count information will be entered and stored in a database which in the future will allow it to be available online to NABA members and the public. If entering your data through the online count form presents any difficulty, please contact NABA for assistance.

COUNT PROGRAM OVERVIEW

In order to encourage increased participation in the NABA Butterfly Count Program and to encourage even more monitoring possibilities, the NABA Board of Directors authorized the introduction of Seasonal Butterfly Counts in 2007. Prior to 2007, only one count per count circle per year could be submitted to NABA. With the introduction of Seasonal Butterfly Counts, a group can, if it so wishes, submit multiple counts of the same circle; however there can still be only one count conducted in the June-July period. For example, a group could count a circle in May, in July, and in Sept., and have the results of all three counts flow into the database that NABA is creating and also be published in the NABA Butterfly Count Report. A NABA Seasonal Butterfly Count should be submitted only if the compiler believes it is likely that a count of that particular circle at that time of year can be maintained long term.

TIMING OF THE COUNT

4th of July Counts may be held any day in June or July. Seasonal Counts may be held any day outside of June-July. Participants should select ONE DATE (one calendar day) on which to compile a list of butterflies observed during a period not longer than 24 hours. The date of your count will determine the minimum number of adult observers and party-hours required:

	Timing/Requirements for United Stated Counts
Count Date of June or July	NABA 4th of July Butterfly Count: A minimum of <u>four</u> <u>adult observers</u> AND <u>6 party-hours per count</u> are REQUIRED for all counts started after 2008; and, except in extenuating circumstances, ALL counts should expend at least 6 party-hours of effort.
Count Date other than June or July	adult observers AND 6 party-hours per count 18

DATE OF NEXT YEAR'S COUNT

Please contact NABA (at address/phone above, or e-mail to <u>cerbone@naba.org</u>) with the date of your next year's count and information on how to contact the compiler. This information is given to people asking about counts in their area, and is entered on the website.

Count data must be entered online at http://www.butterflycounts.org/

Count forms can be downloaded from

www.naba.org/counts.html. The count form can be filled in to use as a guide when submitting count data online.

COUNTERS & COUNT CIRCLES

Unless your count is an existing 4th of July count started before 2008, at least 4 adult observers must participate. One or more groups of counters always produce better results. It is usually desirable to visit several habitats and areas within a count circle, which may be done best by several parties. Since counts are open for public participation, we encourage you to publicize your count plans!

A count is held at one or more selected sites within a 15-mile diameter CIRCLE. Groups starting a new count MUST designate this 15-mile diameter circle. No count circles may overlap—that is, count centers must be a minimum of 15 miles apart. Groups repeating a count held a previous year MUST use the same circle, and count the same sites and habitats as before so far as practical. Up to THREE counts per circle per year (one Spring Seasonal count, one 4th of July count, and one Fall Seasonal count) will be published in the annual Count Report.

The goal of the count is not to compete for the highest numbers, but rather to provide long-term data on trends in butterfly populations. Sites should be chosen for the likelihood that the count can be repeated year after year, not just for richness or rarities. Counts held only one year at distant localities are not as valuable. Most of the interest to counters comes from comparisons of annual results within their own count circle. Children who participate in and contribute to a count are considered field observers.

RULES FOR CONDUCTING THE COUNT

- Count only within an area 7.5 miles in radius from a designated center (making a 15-mile-diameter circle).
- For a given count, survey within the same circle every year. If any change is made to the count circle or center, notify NABA Vice President Jim Springer (springer@naba.org).
- Report only adult butterflies actually observed alive in the wild during a single, one-day period. Butterflies seen from cars or other conveyances may be counted.
- Species that are unusual for your location or date should be documented by photographs if possible, which should be submitted online with your other count data.
- You may estimate the number of butterflies you ACTUALLY SEE (e.g. if there are a great number of American Snouts in a tree, you may count the number in a portion of the tree and extrapolate to generate an estimate of the total number you ACTUALLY SEE in the tree), but not the number of butterflies you think you would have seen had you covered more of the same habitat (e.g., do NOT multiply a count of 1 acre by the number of acres of similar habitat nearby or in the circle but not covered; do not estimate the number of butterflies in a field by walking through a portion of the field and estimating how many butterflies might be in the entire field; and do not multiply numbers seen during some time period by the number of similar time periods that you think butterflies would have been flying.). If you estimate numbers of butterflies that you actually saw, please explain your method of estimating in your Field Notes. Compilers should explain to all participants the need for reporting an estimation method.
- Keep an accurate record of miles covered on foot (to the nearest 1 mi.) and hours spent (to the nearest 0.5 hr.) by each party of counters, as a measure of census effort. If a party counts together some of the time but separates some of the time (to the point where counters are out of sight of each other), report the maximum number of parties that counted (e.g., if there were 1-4 parties over the course of the day, report 4), and add in the miles and hours spent by these separated parties to those spent while together.
- Please look over the forms carefully BEFORE the count so that you will be able to provide the information required. We recommend that you record count data on the paper form, then refer to that when

filling in the online form.

- A MINIMUM of 6 party-hours per count is REQUIRED for all counts started after 2008, and except in extenuating circumstances—ALL counts should expend at least 6 party-hours.
- For any count started after 2008, at least four persons per count must be adult field observers (over age 12).
- The compiler is the contact person for the count.

REPORTING BUTTERFLIES OBSERVED

 The count form lists the butterflies' scientific and English names as given in NABA's checklist (available for download or for sale at www.naba.org/pubs/checklst.html). The 2nd

www.haba.org/pubs/checkIst.html). The 2nd edition of this checklist was published in spring 2001, and NABA will periodically review and revise it. Other butterfly publications may use different species concepts and names.

- Record the total ADULT individuals of each species seen on your count. Do not break totals down by separate sites within the count circle.
- Use the Unlisted Species section of the online form to enter species observed but not included on the count form or online list, using the English or scientific names from NABA's checklist.
- Do NOT specify subspecies UNLESS, in the opinion of the compiler more than one subspecies of a particular species occurs within, or close to, the count circle.
- Use the Unidentified Species section of the online form to enter individuals seen but not identified to species, e.g., 9 *Satyrium* sp., 2 Grass-Skipper sp. Please enter all Unidentified species in the form "Satyrium sp.," "Fritillary sp.," "Nymphalidae sp.," etc., NOT "Satyrium," "Fritillaries" or "Nymphalids."
- Record totals of immature forms (eggs, caterpillars, pupas) in the Immature Butterflies section of the online form. These do NOT count in totals for individuals and species.
- Each different ADULT butterfly identified to species counts as a species. If more than one subspecies is reported, count them as only one species.
- A butterfly not identified to species does not count toward your species total UNLESS that is the only entry reported for that type of butterfly (e..g., *Satyrium* sp. counts as a species ONLY if no other *Satyrium* hairstreak seen on the count was identified to species.)

- Count only ADULT butterflies in the totals for individuals and species. All unidentified adult individuals should be added to the total of individuals.
- Non-butterflies should be mentioned in the Field Notes section only to the extent that they help illuminate butterfly species occurrence or abundance. For example, "gypsy moth infestation may have affected oak-feeding hairstreak abundance." or "many species nectaring at abundant common milkweed."
- On the Butterfly Review/Unusual Sightings page of the online count form, check off any butterfly species that are noteworthy for your location as to species, number, timing, etc., **AND** include a brief explanation in the Unusual Sighting Notes field. The species will then be boldfaced in the Count Report, and your explanation will appear as a footnote to your count summary.

FILLING OUT THE PAPER COUNT FORM

While count data must be submitted online, the paper count forms can be used for field records. Filling out a paper count form prior to starting online data entry makes the process smoother and faster. Some hints are:

- Please estimate the percentage of time in the AM and PM (during which you actually counted) that the sun was shining, and the temperature range, and the wind speed, during the count.
- Number of field parties: A "party" may consist of 1 person or a group of people who are butterflying together—meaning that while butterflying they remain in visual or auditory contact.
- Party-hours: A party, as defined above, that spends one hour in the field actively butterflying on foot is equivalent to one party-hour. For example, if you had three groups of butterfliers and group A, consisting of two people, counted butterflies for 3 hours; group B consisting of one person, counted butterflies for 5 hours; and group C, consisting of three people, counted butterflies for 4 hours, the total party-hours would be 3 + 5 + 4 = 12. Total party-hours cannot exceed the number of hours of the count x the number of parties. Parties that temporarily separate to count different butterflies become separate parties with separate party-hours during the time of separation. E.g., if a party of 3 counts for 3 hours as a single party, breaks up into 3 sub-parties for 2 hours to count separate butterflies, then counts together for 2 more hours, you should report 3 parties (the maximum number at one time) totaling 11 party-hours (1 party x 3 hours + 3 parties x 2 hours + 1 party x 2 hours). Exclude time when butterfly counting did not occur.
- Party-miles = The total miles traveled on foot observing butterflies by each field party as a whole.

E.g., 4 observers in 1 party walking 2 miles in the field = 2 party-miles (**NOT** 8). Add up party-miles of all parties on the count to determine total party-miles. Party-miles for temporarily separated parties are counted in the same manner as described for partyhours above. Butterflies identified from cars or other conveyances may be counted, but the miles are not.

- List first initial and last name of field observers on the count form. It is the compiler's responsibility to obtain the correct names of all participants.
- Imminent threats to habitat, Habitat changes since last year, and Field Notes (such as weather, or explanations of unusual species) should be brief and relevant to the count's butterfly observations. Do NOT include weather in Habitat changes. Do NOT include organisms other than butterflies in Field Notes, except for a limited mention of plants or animals that may have affected butterflies. If there are no imminent threats or habitat changes, please leave these fields blank.
- DOUBLE CHECK paper forms for accuracy and completeness before entering the information online. After you have entered your data online, check that the count summary that is generated matches the data on your paper form.

TIPS FOR FIRST-YEAR COUNTS

- Read instructions and forms carefully BEFORE count day.
- All counts are required to submit results online at www.butterflycounts.org
- New counts should pre-register with NABA to ensure that their proposed count circle does not overlap with other count circles. When you pre-register, please submit a map showing the new count circle. Preregistered counts will also be advertised by NABA. Visit http://www.naba.org/counts/start.html for information.
- It's a good idea to practice how to do the count BEFORE your first count date.
- It's important that at least one counter in each party can identify all butterflies likely to be found in the count area, and that each party carries at least one butterfly field guide.
- Within your count circle, try to cover as many areas and habitats as possible.
- Consult <u>www.naba.org</u> or last year's Count Report for information on existing count circles.

PUBLIC PARTICIPATION

All counts published in the annual report must be open to public participation. If a person wishes to participate in a count, it must be possible for him/her to find out from the compiler, or other designated contact person, the date of the count, where he/she may go within the circle to count, and how to submit results and fees to the compiler. Compilers and counting parties are not obliged to include anyone in their particular counting activities, although cooperation and assistance to new counters are encouraged. If a compiler does not operate within the spirit of this policy (within constraints of unforeseen weather delays), NABA may, at its discretion, not accept the count.

FEES

- A fee of **U.S. \$3.00** is required for each field observer on each count (whether or not they want their names published in the Count Report) to help defray program costs.
- NABA WILL NOT accept or publish your count unless the full fee is paid.
- It is the compiler's responsibility to inform participants ahead of time that they must pay a fee for participation, and to ensure that all fees are paid upon count submission.

WHEN, WHERE, & HOW TO SUBMIT COUNTS

- DEADLINE for count submission to be received by NABA or completed online: September 2.
- Compilers submit count data online at <u>www.butterflycounts.org</u>. Once submitted online, please print the participants list and mail along with full fee payment (in ONE check or money order) to NABA, 4 Delaware Road, Morristown, NJ 07960. Do not send NABA copies of counts submitted online, but do send fee payment and participants list.
- It is the responsibility of the count compiler to get an acceptable count submitted with appropriate fee to NABA by the DEADLINE.
- Counts submitted or paid late will be held for publishing in the following year's Count Report.
- Please keep a copy of your count forms or online

count summary for your records, AND keep details of unusual species sightings, as you may be contacted for confirmatory information by a NABA editor. Please set your email program to accept messages with NABA in the subject line, so that messages from the editors will reach you.

• NABA retains full editorial control over the content of the count report, including butterfly species reports.

SUBMITTING COUNT PHOTOS

We strongly encourage compilers to submit photographs taken on a count of interesting butterflies or of butterflies whose identification is not 100% certain. Interesting, goodquality photos may be published in the Count Report or on the NABA website, and the NABA staff may be able to help with those uncertain IDs. You may upload photos to your online count form, along with information including name of photographer, subject, and its significance. **Please, no email attachments.**

VOLUNTEER OPPORTUNITIES

Publication of the Count Report depends upon many volunteers (editors, artists, etc.). For more information, contact administrator Mike Cerbone at cerbone@naba.org.

PRESS RELEASE THE NABA BUTTERFLY COUNT

Butterflies are one of the most beautiful elements of the natural world, and scientists now recognize that they can also serve an one important indicator of the health of ecosystems. A dedicated group of local naturalists will soon be both enjoying their beauty and contributing to a nationwide program that conducts long-term monitoring of butterfly populations. They welcome public participation, and while knowledge of butterflies is a plus, it is not necessary.

The					
		(name of count	t)		
			Counters will meet at at		
(day of week)	(date)		(time)		
	· · · ·	The count will last	until about,		
	(location)		(time)		
weather permitting.	This butterfly count has been held	since	For more information please contact		
		(first year)			
	at		during the: day / evening / weekend		
(1	name of count compiler)	(phone number/e	mail) (circle appropriate time)		

The NABA Butterfly Count Program has been held annually since 1975, when only 29 counts were held. Volunteers around North America select a count area 15 miles in diameter and conduct a one-day census of all butterflies observed within that circle. Spring Seasonal counts are held prior to June, 4th of July counts are held in June or July, and Fall Seasonal counts are held after July. The best timing for butterfly observation in each count circle varies. The count program is intended to promote interest in butterflies and provide results useful for scientific monitoring of this beautiful and fascinating group of insects.

The North American Butterfly Association (NABA) organizes the counts and publishes their annual reports. For more information on NABA and the Count Program, please send a self-addressed, stamped business envelope to: NABA, 4 Delaware Road, Morristown, NJ 07960. Or check out our website at www.naba.org.

Instructions to Count Compilers:

- Please fill in the above press release. Make as many photocopies as you need to send to the news organizations that serve your area, including newspapers, radio stations, and local-access TV stations.
- You may also follow-up with these media contacts after your count by making your own press release providing interesting results and photos from your butterfly count.

NABA BUTTERFLY COUNT – PARTICIPANTS LIST

PLEASE NOTE: ALL count submissions MUST include a participants list. You may use this form to record the participants on your count prior to entering this information online. THANK YOU!

- The count fee is <u>U.S.\$3.00</u> and is required for EACH field observer, regardless of age, on EACH count (regardless of how many counts a participant attends, and whether or not participants want their names published).
- The cost of a hard copy the Count Report is U.S.\$7.00 for NABA members and U.S.\$11 for non-members.
- For each person buying the report, please list their name AND FULL MAILING ADDRESS to which the report should be sent in SPRING of the year following the Count.
- Make payment for this count with a single check or money order in U.S. dollars payable to NABA.
- Make payment, if desired, for annual NABA membership dues with a separate check or money order in U.S. dollars payable to NABA. NABA ANNUAL DUES: U.S.\$35 for single, U.S.\$45 for family
- An email notice that count forms are available for download will be sent to the compiler at the email address listed below in the spring of the following year.
- Please attach additional sheet(s) if needed.

Count Name States

- Please print the online participants list and mail it with appropriate fee to: NABA, 4 Delaware Road, Morristown, New Jersey, USA 07960
- Please do not send your participants list via registered mail, as this can add much delay. Your cancelled check is your receipt.

NAME/ADDRESS	FEE	Report	Donation	TOTAL
1 Compiler:				
Address:				
City:				
State Zin Code				
email (for NABA use only):	· · · · · · · · · · · · · · · · · · ·			
phone (for NABA use only):				
(home or work?)				
·				

SUBTOTALS FROM PRECEDING PAGE 10	FEE	Report	Donation	TOTAL
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

____ ____

TOTAL

BUTTERFLY COUNT FORM - USA *** REQUIRED INFORMATION ***

DEADLINE for submission of completed online count form to NABA: Count Name (as it appears in the Count Report), State: (do N

Year of count (1st, 5th, etc.):
DATE held:
TIME (military, to nearest 0.5 hr): to
(which equals hours)
Weather:
1. % sunshine in AM:≤10%11-25%26-
50%51-75%76-100% Data not recorded
2. % sunshine in PM: $\{\leq 10\%}$ 11-25%26-
50%51-75%76-100% Data not recorded
3. Temperature: to°F Data not recorded
 Temperature: to°F Data not recorded Wind: to mph Data not recorded
Participants:
1. Number of field observers:
2. Number of field parties (report the maximum
number: if 1-4 parties, report 4):
3. Total number of party-hours by field parties:
(Total party-hours cannot exceed the number of
hours of the count x the number of parties.)
4. Total party-miles on foot by field parties (to <u>nearest</u>
1 mile only:
Compiler's name:
Address:
City:
State: Zip:
Email address (please include so that Count Report
editors may contact you if necessary. It will NOT be
published in the Count Report without your permission.):
OK to publish Do NOT publish
Phone (for NABA use only, will NOT be published):
□ Check here if compiler was NOT also a field observer.
Useful information requested from all counts:
Turnin and thus do to succific buttonfly habitate (non-

Imminent threats to specific butterfly habitats (new, specific information only; please do not repeat generalities year after year, e.g., development, pesticide spraying). If none, leave blank:

Changes to butterfly habitats noticed since last year (do NOT include weather/climate). If none, leave blank:

(lat	ter in decimal degrees at: tude) · gitude) ·
cent	nformation on reporting and mapping count ers please see: ://www.naba.org/count_center.html
e.g., Cou	ter at (describe in words, as exactly as possib "at intersection of <i>A</i> St. and <i>B</i> Rd. in Town o nty." This description must match the coordin e.):
Incl cour	ation (range that is actually counted):ft. des (any significant named areas in circle th ted, e.g., "X County Park, XX Wildlife agement Area, and XXX Preserve"):
 Hab	itats actually covered on the count:

COUNT NAME, State, Year:

* * * <u>ADULT</u> BUTTERFLIES * * * If a species is not listed, write it in at end of form. If subspecies are observed, do NOT include these numbers in the line for the full species. Do NOT check off a supspecies if only one of that species occurs in your area.

PAPILIONIDAE - Swallowtails

- Parnassius eversmanni Eversmann's Parnassian Parnassius clodius Clodius Parnassian Parnassius phoebus Phoebus Parnassian (P. p. smintheus) 'Rocky Mountain' Ph. Parnassian (P. p. behri) 'Sierra Nevada' Phoebus Parnassian Battus philenor Pipevine Swallowtail Battus polydamas Polydamas Swallowtail Eurvtides marcellus Zebra Swallowtail Eurvtides philolaus Dark-kite Swallowtail Papilio polyxenes Black Swallowtail Papilio joanae Ozark Swallowtail Papilio brevicauda Short-tailed Swallowtail Papilio machaon Old World Swallowtail (P. m. bairdii) 'Baird's' Old World Swallowtail (P. m. oregonius) 'Oregon' Old World Swallowtail Papilio zelicaon Anise Swallowtail Papilio indra Indra Swallowtail Papilio cresphontes Giant Swallowtail Papilio aristodemus Schaus' Swallowtail Papilio ornythion Ornythion Swallowtail Papilio glaucus Eastern Tiger Swallowtail Papilio canadensis Canadian Tiger Swallowtail Papilio rutulus Western Tiger Swallowtail Papilio multicaudata Two-tailed Swallowtail Papilio eurymedon Pale Swallowtail Papilio troilus Spicebush Swallowtail Papilio palamedes Palamedes Swallowtail Papilio anchisiades Ruby-spotted Swallowtail PIERIDAE - Whites & Sulphurs Neophasia menapia Pine White Neophasia terlootii Chiricahua White Appias drusilla Florida White Pontia beckerii Becker's White Pontia sisymbrii Spring White
- *Pontia protodice* Checkered White
- *Pontia occidentalis* Western White
- *Pieris napi* Mustard White
- (P. n. oleracea) 'Veined' Mustard White
- ____ (P. n. marginalis) 'Margined' Mustard White
- _____ Pieris rapae Cabbage White
- _____ Ascia monuste Great Southern White
- _____ Ganyra josephina Giant White
- _____ Euchloe ausonides Large Marble
- _____ Euchloe creusa Northern Marble

Euchloe hyantis Pearly Marble (E. h. hyantis) 'California' Pearly Marble (*E. h. lotta*) 'Desert' Pearly Marble *Euchloe olympia* Olympia Marble Anthocharis cethura Desert Orangetip (A. c. pima) 'Pima' Desert Orangetip Anthocharis sara Sara Orangetip (A. s. sara) 'Pacific' Sara Orangetip (A. s. stella) 'Stella' Sara Orangetip Anthocharis midea Falcate Orangetip Anthocharis lanceolata Gray Marble Colias philodice Clouded Sulphur Colias eurytheme Orange Sulphur Colias occidentalis Western Sulphur Colias christina Christina's Sulphur Colias alexandra Queen Alexandra's Sulphur (C. a. harfordii) 'Harford's' Queen Alexandra's Su. Colias meadii Mead's Sulphur Colias canadensis Canadian Sulphur Colias nastes Labrador Sulphur Colias scudderi Scudder's Sulphur *Colias gigantea* Giant Sulphur Colias behrii Sierra Sulphur Colias pelidne Pelidne Sulphur _ Colias interior Pink-edged Sulphur Colias palaeno Palaeno Sulphur Colias eurydice California Dogface Colias cesonia Southern Dogface Anteos clorinde White Angled-Sulphur Anteos maerula Yellow Angled-Sulphur Phoebis sennae Cloudless Sulphur Phoebis philea Orange-barred Sulphur Phoebis agarithe Large Orange Sulphur Phoebis statira Statira Sulphur *Kricogonia lyside* Lyside Sulphur Eurema daira Barred Yellow Eurema boisduvaliana Boisduval's Yellow Eurema mexicana Mexican Yellow Eurema proterpia Tailed Orange Eurema lisa Little Yellow Eurema nise Mimosa Yellow

- *Eurema dina* Dina Yellow
- *Eurema nicippe* Sleepy Orange
- _____ Nathalis iole Dainty Sulphur

LYCAENIDAE - Harvester & Coppers Feniseca tarauinius Harvester Lycaena arota Tailed Copper Lycaena phlaeas American Copper *Lycaena cupreus* Lustrous Copper Lycaena xanthoides Great Copper *Lycaena dione* Gray Copper Lycaena editha Edith's Copper Lycaena gorgon Gorgon Copper Lycaena hyllus Bronze Copper Lycaena rubidus Ruddy Copper (L. r. ferrisi) 'White Mountains' Ruddy Copper *Lycaena heteronea* Blue Copper Lycaena epixanthe Bog Copper Lycaena dorcas Dorcas Copper *Lycaena helloides* Purplish Copper Lycaena nivalis Lilac-bordered Copper Lycaena mariposa Mariposa Copper Hypaurotis crysalus Colorado Hairstreak Habrodais grunus Golden Hairstreak Eumaeus atala Atala Atlides halesus Great Purple Hairstreak Chlorostrymon simaethis Silver-banded Hairstreak Phaeostrymon alcestis Soapberry Hairstreak Satvrium titus Coral Hairstreak Satyrium behrii Behr's Hairstreak Satvrium fuliginosum Sooty Hairstreak Satyrium acadica Acadian Hairstreak Satyrium californica California Hairstreak Satyrium sylvinus Sylvan Hairstreak Satyrium edwardsii Edwards' Hairstreak Satyrium calanus Banded Hairstreak Satyrium carvaevorum Hickory Hairstreak Satyrium kingi King's Hairstreak Satyrium liparops Striped Hairstreak Satvrium auretorum Gold-hunter's Hairstreak Satyrium tetra Mountain Mahogany Hairstreak Satyrium saepium Hedgerow Hairstreak Satyrium favonius Oak Hairstreak (S. f. favonius) 'Southern' Oak Hairstreak (S. f. ontario) 'Northern' Oak Hairstreak Satyrium polingi Poling's Hairstreak Cyanophrys herodotus TropicalGreenstreak Panthiades bathildis Zebra Cross-streak *Callophrvs dumetorum* Bramble Hairstreak (*C. d. apama*) 'Canyon' Bramble Hairstreak (*C. d. affinis*) 'Immaculate' Bramble Hairstreak Callophrys sheridanii Sheridan's Hairstreak Callophrys xami Xami Hairstreak Callophrys augustinus Brown Elfin Callophrys mossii Moss' Elfin Callophrys polios Hoary Elfin Callophrys irus Frosted Elfin Callophrys henrici Henry's Elfin Callophrvs niphon Eastern Pine Elfin

Callophrvs ervphon Western Pine Elfin *Callophrvs spinetorum* Thicket Hairstreak Callophrys johnsoni Johnson's Hairstreak Callophrys gryneus Juniper Hairstreak (C. g. gryneus) 'Olive' Juniper Hairstreak (C. g. siva) 'Siva' Juniper Hairstreak (C. g. nelsoni) 'Nelson's' Juniper Hairstreak Callophrys hesseli Hessel's Hairstreak Parrhasius m-album White M Hairstreak Strymon melinus Gray Hairstreak Strymon martialis Martial Scrub-Hairstreak Strvmon acis Bartram's Scrub-Hairstreak Strvmon alea Lacey's Scrub-Hairstreak Strymon istapa Mallow Scrub-Hairstreak Strymon bazochii Lantana Scrub-Hairstreak *Electrostrymon angelia* Fulyous Hairstreak Calycopis cecrops Red-banded Hairstreak Calycopis isobeon Dusky-blue Groundstreak Ministrymon leda Leda Ministreak Ministrymon clytie Clytie Ministreak Ministrymon azia Gray Ministreak *Erora laeta* Early Hairstreak Erora quaderna Arizona Hairstreak LYCAENIDAE - Blues Brephidium exile Western Pygmy-Blue Brephidium isophthalma Eastern Pygmy-Blue Leptotes cassius Cassius Blue Leptotes marina Marine Blue Zizula cyna Cyna Blue Hemiargus thomasi Miami Blue Hemiargus ammon Nickerbean Blue Hemiargus ceraunus Ceraunus Blue Hemiargus isola Reakirt's Blue Everes comyntas Eastern Tailed-Blue Everes amvntula Western Tailed-Blue Celastrina ladon Spring Azure (C. l. humulus) 'Hops' Spring Azure (C. l. neglecta) 'Summer' Spring Azure Celastrina neglectamajor Appalachian Azure *Celastrina nigra* Dusky Azure Philotes sonorensis Sonoran Blue Euphilotes battoides Square-spotted Blue (E. b. allyni) 'El Segundo' Square-spotted Blue (E. b. bernardino) 'Bernardino' Square-spotted Blue *Euphilotes enoptes* Dotted Blue (includes *ancilla*) (E. e. mojave) 'Mojave' Dotted Blue *Euphilotes rita* Rita Blue (includes *pallescens*) Euphilotes spaldingi Spalding's Blue Glaucopsyche piasus Arrowhead Blue Glaucopsyche lygdamus Silvery Blue Lycaeides idas Northern Blue Lycaeides melissa Melissa Blue (L. m. samuelis) 'Karner' Melissa Blue

Plebejus saepiolus Greenish Blue Plebeius icarioides Boisduval's Blue Plebejus emigdionis San Emigdio Blue Plebejus shasta Shasta Blue Plebejus acmon Acmon Blue Plebejus lupinus Lupine Blue Plebejus optilete Cranberry Blue Plebejus neurona Veined Blue Agriades glandon Arctic Blue (A. g. podarce 'Sierra' Arctic Blue Agriades cassiope Heather Blue **RIODINIDAE** - Metalmarks Calephelis virginiensis Little Metalmark *Calephelis borealis* Northern Metalmark *Calephelis nemesis* Fatal Metalmark *Calephelis perditalis* Rounded Metalmark *Calephelis wrightii* Wright's Metalmark Calephelis mutica Swamp Metalmark Calephelis rawsoni Rawson's Metalmark Calephelis arizonensis Arizona Metalmark *Caria ino* Red-bordered Metalmark Lasaia sula Blue Metalmark Melanis pixe Red-bordered Pixie *Emesis zela* Zela Metalmark *Emesis ares* Ares Metalmark Apodemia mormo Mormon Metalmark Apodemia palmerii Palmer's Metalmark Apodemia nais Nais Metalmark NYMPHALIDAE - Brushfoots Libytheana carinenta American Snout *Agraulis vanillae* Gulf Fritillary Dione moneta Mexican Silverspot Dryadula phaetusa Banded Orange Heliconian Drvas iulia Julia Heliconian Eueides isabella Isabella's Heliconian Heliconius charithonia Zebra Heliconian Heliconius erato Erato Heliconian *Euptoieta claudia* Variegated Fritillary *Euptoieta hegesia* Mexican Fritillary Speyeria diana Diana Fritillary Speyeria cybele Great Spangled Fritillary Speyeria aphrodite Aphrodite Fritillary Speyeria idalia Regal Fritillary Speveria edwardsii Edwards' Fritillary Speyeria coronis Coronis Fritillary Speyeria zerene Zerene Fritillary Speyeria callippe Callippe Fritillary Speyeria egleis Great Basin Fritillary Speyeria adiaste Unsilvered Fritillary Speveria atlantis Atlantis Fritillary (S. a. atlantis) 'Atlantis' Atlantis Fritillary (S. a. hesperis) 'Hesperis' Atlantis Fritillary *Speveria hydaspe* Hydaspe Fritillary

Speyeria mormonia Mormon Fritillary Boloria napaea Mountain Fritillary Boloria eunomia Bog Fritillary Boloria selene Silver-bordered Fritillary Boloria bellona Meadow Fritillary Boloria frigga Frigga Fritillary *Boloria improba* Dingy Fritillary Boloria kriemhild Relict Fritillary *Boloria epithore* Pacific Fritillary Boloria freija Freija Fritillary Boloria montinus Purplish Fritillary (formerly titania) Boloria chariclea Arctic Fritillary Poladryas minuta Dotted Checkerspot Poladryas arachne Arachne Checkerspot *Chlosvne theona* Theona Checkerspot Chlosyne cyneas Black Checkerspot Chlosyne fulvia Fulvia Checkerspot Chlosyne leanira Leanira Checkerspot Chlosyne california California Patch Chlosyne lacinia Bordered Patch Chlosvne definite Definite Patch Chlosyne janais Crimson Patch Chlosvne rosita Rosita Checkerspot Chlosyne gorgone Gorgone Checkerspot Chlosyne nycteis Silvery Checkerspot Chlosyne harrisii Harris' Checkerspot Chlosyne palla Northern Checkerspot Chlosyne whitneyi Rockslide Checkerspot Chlosyne acastus Sagebrush Checkerspot Chlosyne gabbii Gabb's Checkerspot Chlosyne hoffmanni Hoffman's Checkerspot Dymasia dymas Tiny Checkerspot *Texola elada* Elada Checkerspot Phyciodes texana Texan Crescent Phyciodes frisia Cuban Crescent Phyciodes tulcis Pale-banded Crescent *Phyciodes vesta* Vesta Crescent Phyciodes phaon Phaon Crescent Phyciodes tharos Pearl Crescent *Phyciodes selenis* Northern Crescent Phyciodes batesii Tawny Crescent Phyciodes campestris Field Crescent *Phyciodes picta* Painted Crescent Phyciodes orseis California Crescent *Phyciodes pallida* Pale Crescent *Phyciodes mylitta* Mylitta Crescent Euphydryas gillettii Gillett's Checkerspot Euphydryas chalcedona Variable Checkerspot (E. c. chalcedona) 'Chalcedon' Variable Checkerspot (E. c. colon) 'Snowberry' Variable Checkerspot (E. c. anicia) 'Anicia' Variable Checkerspot Euphydryas editha Edith's Checkerspot

Euphydrvas phaeton Baltimore Checkerspot

Polygonia interrogationis Ouestion Mark Polvgonia comma Eastern Comma Polygonia satyrus Satyr Comma Polygonia faunus Green Comma *Polygonia gracilis* Hoary Comma (P. g. zephyrus) 'Zephyr' Hoary Comma Polygonia oreas Oreas Comma Polygonia progne Gray Comma Nymphalis vaualbum Compton Tortoiseshell Nymphalis californica California Tortoiseshell Nymphalis antiopa Mourning Cloak Nymphalis milberti Milbert's Tortoiseshell Vanessa virginiensis American Lady Vanessa cardui Painted Lady Vanessa annabella West Coast Lady Vanessa atalanta Red Admiral Junonia coenia Common Buckeye Junonia evarete Mangrove Buckeye _Junonia genoveva Tropical Buckeye Anartia jatrophae White Peacock Anartia fatima Banded Peacock Siproeta stelenes Malachite Limenitis arthemis Red-spotted Admiral (L. a. arthemis) White Admiral (L. a. astyanax) Red-spotted Purple *Limenitis archippus* Viceroy Limenitis weidemeverii Weidemever's Admiral *Limenitis lorquini* Lorquin's Admiral Adelpha fessonia Band-celled Sister Adelpha bredowii California Sister Myscelia ethusa Mexican Bluewing *Eunica monima* Dingy Purplewing *Eunica tatila* Florida Purplewing Mestra amymone Common Mestra Biblis hyperia Red Rim Hamadrvas februa Grav Cracker Hamadryas guatamalea Guatemalan Cracker Marpesia chiron Many-banded Daggerwing Marpesia petreus Ruddy Daggerwing Anaea aidea Tropical Leafwing Anaea floridalis Florida Leafwing Anaea andria Goatweed Leafwing Asterocampa celtis Hackberry Emperor Asterocampa leilia Empress Leilia Asterocampa clyton Tawny Emperor *Doxocopa laure* Silver Emperor NYMPHALIDAE - Satyrs Enodia portlandia Southern Pearly-eye Enodia anthedon Northern Pearly-eye Enodia creola Creole Pearly-eye

- Satyrodes eurydice Eyed Brown
- Satyrodes appalachia Appalachian Brown
- *Cyllopsis pyracmon* Nabokov's Satyr
- *Cyllopsis pertepida* Canyonland Satyr

Cvllopsis gemma Gemmed Satyr Hermeuptychia sosybius Carolina Satyr Neonympha areolata Georgia Satyr Megisto cymela Little Wood-Satyr Megisto rubricata Red Satyr Paramercera allyni Pine Satyr Coenonympha haydenii Hayden's Ringlet Coenonympha tullia Common Ringlet (C. t. inornata) 'Inornate' Common Ringlet (C. t. ochracea) 'Ochre' Common Ringlet (C. t. california) 'California' Common Ringlet Cercvonis pegala Common Wood-Nymph Cercvonis meadii Mead's Wood-Nymph Cercyonis sthenele Great Basin Wood-Nymph Cercyonis oetus Small Wood-Nymph *Erebia disa* Disa Alpine Erebia mancinus Taiga Alpine Erebia discoidalis Red-disked Alpine Erebia theano Theano Alpine Erebia epipsodea Common Alpine Erebia callias Colorado Alpine Gyrocheilus patrobus Red-bordered Satyr Neominois ridingsii Riding's Satyr Oeneis nevadensis Great Arctic Oeneis macounii Macoun's Arctic Oeneis chryxus Chryxus Arctic Oeneis uhleri Uhler's Arctic Oeneis alberta Alberta Arctic Oeneis taygete White-veined Arctic Oeneis jutta Jutta Arctic Oeneis melissa Melissa Arctic Oeneis polixenes Polixenes Arctic NYMPHALIDAE - Milkweed Butterflies Danaus plexippus Monarch Danaus gilippus Queen Danaus eresimus Soldier **HESPERIIDAE - Firetips** Pyrrhopyge araxes Dull Firetip **HESPERIIDAE - Spreadwing Skippers** Phocides pigmalion Mangrove Skipper *Phocides polybius* Guava Skipper Phocides belus Big-spotted Beamer *Epargyreus zestos* Zestos Skipper Epargyreus clarus Silver-spotted Skipper Polygonus leo Hammock Skipper Chioides catillus White-striped Longtail *Chioides zilpa* Zilpa Longtail Zestusa dorus Short-tailed Skipper

- ____ Codatractus arizonensis Arizona Skipper
- _____ Codatractus mysie Valeriana Cloudywing
- _____ Urbanus proteus Long-tailed Skipper
- _____ Urbanus belli Double-striped Longtail

Turquoise Longtail - Urbanus evona Urbanus dorantes Dorantes Longtail Urbanus teleus Teleus Longtail Urbanus procne Brown Longtail Astraptes fulgerator Two-barred Flasher Autochton cellus Golden Banded-Skipper Achalarus lyciades Hoary Edge Achalarus casica Desert Cloudywing Achalarus tehuacana Dark Cloudywing Achalarus toxeus Coyote Cloudywing Thorybes bathyllus Southern Cloudywing Thorvbes pylades Northern Cloudywing Thorvbes mexicanus Mexican Cloudywing Thorybes confusis Confused Cloudywing Thorybes drusius Drusius Cloudywing Cogia calchas Mimosa Skipper Cogia hippalus Acacia Skipper Cogia outis Outis Skipper Cogia caicus Gold-costa Skipper Staphylus ceos Golden-headed Scallopwing Staphylus mazans Mazans Scallopwing Staphylus havhurstii Havhurst's Scallopwing Gorgythion begga Variegated Skipper Sostrata bifasciata Blue-studded Skipper Carrhenes canescens Hoary Skipper Xenophanes tryxus Glassy-winged Skipper Antigonus emorsus White Spurwing Systasea pulverulenta Texas Powdered-Skipper Systasea zampa Arizona Powdered-Skipper Achlvodes thraso Sickle-winged Skipper Achlyodes pallida Pale Sicklewing Grais stigmaticus Hermit Skipper Timochares ruptifasciatus Brown-banded Skipper Anastrus sempiternus Common Bluevent Chiomara asychis White-patched Skipper Gesta gesta False Duskywing Ephyriades brunneus Florida Duskywing Erynnis icelus Dreamy Duskywing Erynnis brizo Sleepy Duskywing Ervnnis juvenalis Juvenal's Duskywing Erynnis telemachus Rocky Mountain Duskywing Erynnis propertius Propertius Duskywing Erynnis meridianus Meridian Duskywing Erynnis scudderi Scudder's Duskywing Erynnis horatius Horace's Duskywing Erynnis tristis Mournful Duskywing Erynnis martialis Mottled Duskywing Erynnis pacuvius Pacuvius Duskywing Erynnis zarucco Zarucco Duskywing Erynnis funeralis Funereal Duskywing Erynnis lucilius Columbine Duskywing Erynnis baptisiae Wild Indigo Duskywing Erynnis afranius Afranius Duskywing Erynnis persius Persius Duskywing Pyrgus centaureae Grizzled Skipper

Pvrgus ruralis Two-banded Checkered-Skipper Pyrgus xanthus Mountain Checkered-Skipper Pyrgus scriptura Small Checkered-Skipper Pyrgus communis Common Checkered-Skipper *Pyrgus albescens* White Checkered-Skipper Pyrgus sp. Common/White Checkered-Skipper Pyrgus oileus Tropical Checkered-Skipper Pyrgus philetas Desert Checkered-Skipper Heliopetes domicella Erichson's White-Skipper Heliopetes ericetorum Northern White-Skipper Heliopetes laviana Laviana White-Skipper Heliopetes macaira Turk's-cap White-Skipper Heliopetes sublinea East-Mexican White-Skipper Celotes nessus Common Streaky-Skipper Pholisora catullus Common Sootywing Hesperopsis libva Mojave Sootywing

_____ *Hesperopsis alpheus* Saltbush Sootywing (incl. *gracielae*)

HESPERIIDAE - Skipperlings

_____ Carterocephalus palaemon Arctic Skipper

Piruna pirus Russet Skipperling

Piruna polingi Four-spotted Skipperling

____ Piruna cingo Many-spotted Skipperling

HESPERIIDAE - Grass-Skippers

Vidius perigenes Pale-rayed Skipper

Nastra lherminier Swarthy Skipper

Nastra julia Julia's Skipper

Nastra neamathla Neamathla Skipper

_____ Cymaenes tripuncta Three-spotted Skipper

Cymaenes odilia Fawn-spotted Skipper

Lerema accius Clouded Skipper

Decinea percosius Double-dotted Skipper

Ancyloxypha numitor Least Skipper

_____ Ancyloxypha arene Tropical Least Skipper

_____ Oarisma poweshiek Poweshiek Skipperling

____ Oarisma garita Garita Skipperling

____ Oarisma edwardsii Edwards' Skipperling

Copaeodes aurantiacus Orange Skipperling

Copaeodes minimus Southern Skipperling

_____ Adopaeoides prittwitzi Sunrise Skipper

Thymelicus lineola European Skipper

_____ Hylephila phyleus Fiery Skipper

_____ Pseudocopaeodes eunus Alkali Skipper

_____ Hesperia uncas Uncas Skipper

_____ Hesperia juba Juba Skipper

H. comma Common Branded Skipper (incl. *manitoba*,

assiniboia, colorado)

_____ Hesperia ottoe Ottoe Skipper

Hesperia pahaska Pahaska Skipper

_____ Hesperia columbia Columbian Skipper

- _____ Hesperia metea Cobweb Skipper
- _____ Hesperia viridis Green Skipper

Hesperia attalus Dotted Skipper Hesperia meskei Meske's Skipper Hesperia dacotae Dakota Skipper Hesperia lindseyi Lindsey's Skipper Hesperia sassacus Indian Skipper Hesperia miriamae Sierra Skipper Hesperia nevada Nevada Skipper Polites carus Carus Skipper Polites peckius Peck's Skipper Polites sabuleti Sandhill Skipper Polites draco Draco Skipper Polites baracoa Baracoa Skipper Polites themistocles Tawny-edged Skipper Polites origenes Crossline Skipper Polites mystic Long Dash Polites sonora Sonora Skipper Polites vibex Whirlabout Wallengrenia otho Southern Broken-Dash Wallengrenia egeremet Northern Broken-Dash Pompeius verna Little Glassywing Atalopedes campestris Sachem Atrytone arogos Arogos Skipper Anatrytone logan Delaware Skipper Problema byssus Byssus Skipper Problema bulenta Rare Skipper Ochlodes sylvanoides Woodland Skipper Ochlodes agricola Rural Skipper Ochlodes yuma Yuma Skipper Paratrytone snowi Snow's Skipper Poanes massasoit Mulberry Wing Poanes hobomok Hobomok Skipper Poanes zabulon Zabulon Skipper Poanes taxiles Taxiles Skipper Poanes aaroni Aaron's Skipper Poanes vehl Yehl Skipper Poanes viator Broad-winged Skipper Poanes melane Umber Skipper Quasimellana eulogius Common Mellana Euphyes arpa Palmetto Skipper Euphyes palatka Palatka Skipper Euphyes dion Dion Skipper Euphyes dukesi Dukes' Skipper Euphyes conspicua Black Dash Euphyes berryi Berry's Skipper Euphyes bimacula Two-spotted Skipper Euphyes vestris Dun Skipper Asbolis capucinus Monk Skipper

Atrytonopsis hianna Dusted Skipper Atrytonopsis lunus Moon-marked Skipper Atrytonopsis vierecki Viereck's Skipper Atrytonopsis pittacus White-barred Skipper Atrytonopsis python Python Skipper Atrytonopsis cestus Cestus Skipper Atrytonopsis edwardsii Sheep Skipper Notamblyscirtes simius Simius Skipper Amblyscirtes exoteria Large Roadside-Skipper Amblyscirtes cassus Cassus Roadside-Skipper Amblyscirtes aenus Bronze Roadside-Skipper Amblyscirtes oslari Oslar's Roadside-Skipper Amblyscirtes hegon Pepper and Salt Skipper Amblyscirtes elissa Elissa Roadside-Skipper Amblyscirtes texanae Texas Roadside-Skipper A. tolteca Toltec Roadside-Skipper A. aesculapius Lace-winged Roadside-Skipper Amblyscirtes carolina Carolina Roadside-Skipper Amblyscirtes reversa Reversed Roadside-Skipper Amblyscirtes nereus Slaty Roadside-Skipper Amblyscirtes nysa Nysa Roadside-Skipper Amblyscirtes eos Dotted Roadside-Skipper Amblyscirtes vialis Common Roadside-Skipper Amblyscirtes celia Celia's Roadside-Skipper Amblyscirtes belli Bell's Roadside-Skipper Amblyscirtes alternata Dusky Roadside-Skipper Amblyscirtes phylace Orange-headed Roadside-Skipper Amblyscirtes fimbriata Orange-edged Roadside-Skipper Lerodea eufala Eufala Skipper Lerodea arabus Violet-clouded Skipper Lerodea dysaules Olive-clouded Skipper Oligoria maculata Twin-spot Skipper Calpodes ethlius Brazilian Skipper Panoquina panoquin Salt Marsh Skipper Panoquina panoquinoides Obscure Skipper Panoquina errans Wandering Skipper Panoquina ocola Ocola Skipper Panoquina sylvicola (=leucas) Purple-washed Skipper **HESPERIIDAE - Giant-Skippers** Megathymus streckeri Strecker's Giant-Skipper *Megathymus yuccae* Yucca Giant-Skipper Megathymus cofaqui Cofaqui Giant-Skipper

_____ Megathymus ursus Ursine Giant-Skipper

COUNT NAME, State, Year:

UNLISTED/UNIDENTIFIED SPECIES: Butterflies not on preceding list, or butterflies not fully identified to species, should be listed here and copied to Unlisted Species page of online count form. Butterflies identified only to group (e.g., Hairstreak sp.) or to genus (e.g., *Satyrium* sp.) are added to the total of adult species ONLY if no other butterflies in that group or genus have been identified to species. However, ALWAYS add the number of <u>individuals</u> listed here to your total individuals. Please be sure to include ALL unidentified butterflies, even if it's 600 Grass-Skipper sp. or simply 20 Butterfly sp., as these figures are important for data analysis.

Compilers: Please check your totals against those calculated by the online count form!

* IMMATURE BUTTERFLIES *

Use English names and copy to Immature Butterflies page of online count form. Do NOT add to totals of species or individuals.

Species:
Number: egg(s) caterpillar(s) pupa(s)
on (plant/surface):
Species: Number: egg(s) caterpillar(s) pupa(s)
Number: egg(s) caterpillar(s) pupa(s)
on (plant/surface):
Species:
Number:egg(s)caterpillar(s)pupa(s)
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on (plant/surface):
Species:
Number: egg(s) caterpillar(s) pupa(s)
on (plant/surface):

Field Notes (use for unusual weather, methods of estimating numbers, etc.). Copy to Field Notes section on first page of online count form.

COUNT NAME, St	ite, Year:
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Submit your count data online at <u>www.butterflycounts.org</u> and mail 1 copy of your printed Participants List along with fee payment to:

NABA, 4 Delaware Rd, Morristown, NJ 07960 USA

- * Please make full payment for this count in ONE check or money order; include a separate check or money order for NABA membership dues.
- * Please do NOT send via registered mail.

Thank you very much for your cooperation & participation!