



THE PEARLY-EYE 2003

Field Reports of the NABA North Jersey Butterfly Club

Volume 3
February 2004

Summary of 2003 Fourth of July Butterfly Counts

by Jim Springer

In contrast to last year, this year's counts were preceded by a cool, wet spring. While the count days themselves did not suffer directly because of poor weather, as had many of the preceding weekends, a number of species that are normally seen were either not reported or had very low counts. However, because of the delayed season other species which typically peak earlier were seen in higher-than-average numbers. Thus, on balance, it was an average year in terms of number of species and individuals. In fact a total of 68 species was seen on the northern NJ counts this year compared to last year's 63 (not including the Lakehurst count). Also, showing that surprises still happen, two of the longest running counts, Raritan and Springdale, each tallied a new species (see below).

The new Mercer County count is indicative of the increasing interest in butterflies as well as the expanding coverage in the southern part of our region. In its debut year, 16 observers in five parties found a very respectable 3,133 butterflies of 33 species including the only Gray Hairstreak, Common Buckeye and Horace's Duskywings on all the northern NJ counts.

New to the Raritan count were eight Bog Coppers, found because of a chance encounter with two local butterflyers (who have, incidentally, been induced to join the count in 2004). The finding of just seven Wild Indigo Duskywings on this count represents the only time that the species has been seen in single digits in the past 10 years. Normally more than 100 individuals are found.

The Springdale count picked up a species new for the count—Common Ringlet (which is normally between broods). However, counters found only a single Northern Metalmark, one of the late-emerging species, in stark contrast to the record-setting 100 found last year. Another

Contents

Summary of the 2003 Fourth of July Counts / Jim Springer	p. 1
NABA Surveys of New Jersey WMAs / Sharon Wander	p. 1
NABA North Jersey 2003 Field Trip Reports	p. 2
Overview of the 2003 Season / Tom Halliwell	p. 3
The 2003 Annotated List of Butterflies / Tom Halliwell	p. 4
Tabulation of 2003 Fourth of July Counts	p. 12

NABA Members Survey Butterflies At State Wildlife Management Areas

by Sharon Wander

In 2003, NABA North Jersey embarked on a cooperative effort with the New Jersey Endangered and Nongame Species Program (ENSP) to survey butterfly populations at State Wildlife Management Areas (WMAs) in northern New Jersey. Wade and I were initially approached in February of 2002 for some ideas about management projects that might be undertaken on State land to benefit Threatened and Endangered butterfly species. Well, we had a few ideas, but we explained that one of the biggest obstacles to management was the fact that we don't know where any colonies are for a number of those species (e.g., Mitchell's Satyr, Bronze Copper, Southern Grizzled Skipper...). After ENSP digested this information, and obtained some funding from the US Fish & Wildlife Service (through the state Bureau of Land Management), the project eventually morphed into a more broad-based effort to determine the butterfly species and relative numbers present on a selected list of WMAs (pronounced WHAM-uhs, by the way). Oh, and did we mention that ENSP was going to pay NABA members to do this? Sounds great, but we weren't quite to butterfly heaven yet.

We still had a great deal of wrangling to do with ENSP—through our contact person, biologist Kris Schantz—over how the surveys were to be conducted. They wanted to follow a scheme, first developed in England, called the Pollard Walk, whereby on each tract to be censused, the observer recorded only those butterflies seen within a rigidly defined transect (for example, a 3-km-long, predetermined route along which only those butterflies within 2.5 meters on either side, 5 meters ahead, and 5 meters above the observer are counted). This methodology sounded way too restrictive for us NABA free spirits, and also had numerous scientific disadvantages. We pointed out some, and Mike Gochfeld and Joanna Burger e-mailed ENSP quite a detailed discussion of the pros and cons of various sampling methods. In the end ENSP apparently realized that NABA was not going to be happy with transect surveys, and that this method was not going to give them the statistically valid data they were hoping for. Instead, it was decided to do random opportunistic surveys within areas of the WMAs that we selected. As the name suggests, in "random opportunistic-

NABA North Jersey 2003 Field Trip Reports

April 13 & May 18 --- The first of these two trips led by Fred & Patti Pfeifer to The Nature Conservancy's High Mountain Preserve in Passaic County was in hopes of finding suitable habitat for Grizzled Skipper, a butterfly historically known from nearby. The larval food plant, Dwarf Cinquefoil, was located on the top of the mountain, so a subsequent trip was planned. On the May trip Ahmet photographed a very hopeful NABA group poised to rediscover Grizzled Skipper. Unfortunately that did not happen. We did see some butterflies however, most notably 8-10 Cobweb Skippers, a large number of Eastern Tailed Blues, a few American Ladies, and a Spicebush Swallowtail. The May trip may have been too late for Grizzled Skipper, and the cold, wet weather this year made any spring butterflying very unpredictable. We hope to try again next year.

April 27 & May 4 --- These two trips, led by Chris Williams, make up the annual "Elfin Run" in which we try to see all seven New Jersey species in the genus *Callophrys*. This year, however, we ran afoul of the prolonged cool weather and missed two species that had probably not yet emerged. The Sandy Hook portion, on April 27, had more butterflies (10) than butterfly species (5) and could not find a hoped-for Juniper Hairstreak. But we did encounter five fresh Henry's Elfins, the first ones reported this year. Eleven NABA hopefuls had considerably more luck on a cool day the following week on the Pine Barrens/Assunpink leg of the "Run." Warren Grove produced Brown and Hoary Elfins as well as Sleepy Duskywings, though in lower numbers than usual. At a Chatsworth location we were pleased to find Cobweb Skippers and Pine Elfins. However, at neither Pine Barrens site did we locate an Hessel's Hairstreak, one of the target *Callophrys*. By the time we reached Assunpink WMA the day had warmed nicely. We were surprised by 3-4 Frosted Elfins; though this is a known location for them, most of us thought they would not yet be flying. Also here were 11 other species including 19 Falcate Orangetips, 21 Eastern Tailed Blues, and the first Silver-spotted Skipper of the year.

June 15 --- Our group of 14 people met at the entrance

The Pearly-Eye 2003 is a publication of the NABA North Jersey Butterfly Club, a chapter of the North American Butterfly Association, Inc. (NABA). It is intended to highlight the activities of the Club and to provide an overview of the status of butterflies in northern New Jersey this season (from Mercer and Monmouth counties north). Many thanks to Sharon Wander for providing invaluable editorial assistance for this issue. Next year's (2004) butterfly sightings should be sent to editor Tom Halliwell, 19 Kings Road, Netcong, NJ 07857 (tbhalliwell@worldnet.att.net).

The Club normally meets on the first Tuesday of the month at 7:30 p.m. in the Haggerty Education Center of the Frelinghuysen Arboretum, 53 East Hanover Avenue, Morristown, NJ (but note that the November meeting is the second Tuesday). A list of field trips, directions to meetings, and other useful information can be found on the chapter's website at <http://www.naba.org> (click on chapters). The officers for 2004 are:

President, Ahmet Baytas (baytasa@mail.montclair.edu);
Vice-President, Tom Halliwell (tbhalliwell@worldnet.att.net);
Treasurer, Deedee Burnside (deedeeburnside@aol.com);
Secretary, Betty White (bwhite1121@optonline.net)

Membership in the NABA North Jersey Butterfly Club is included with annual membership in the North American Butterfly Association. To join send \$30 (\$40 family) to NABA Membership Services, 4 Delaware Road, Morristown, NJ 07960, or go to <http://www.naba.org> for further information.

to Collier's Mills WMA at 9:30 a.m. After making the leader (Chris Williams) sweat a little, Paula Williams found the first Dotted Skipper, our target species, at the far side of the field. A second one was located by Jim Springer a short time later. Also seen here were Spicebush Swallowtail, Eastern Tiger Swallowtail, Cabbage White, American Lady, Southern Cloudywing, and Tawny-edged Skipper. The next stop was at the very wet Lakehurst Bog, where Jeff & Jane joined the group, and the following butterflies were added to our day list: Summer Azure, Pearl Crescent, Question Mark, Mourning Cloak, Red Admiral, Red-spotted Purple, Silver-spotted Skipper—but no Bog Coppers. We then caravanned as a group (now 16) to our next location at Dover Forge in Double Trouble State Park. Here, thanks to Sharon Wander and Joe Burgiel, we added Common Roadside-Skipper to our list. We also saw Red-banded Hairstreak, Eastern Tailed-Blue, both Northern and Southern cloudywings, Swarthy and Peck's skippers, and Sachem. At the end of the day we were serenaded with a chorus of Pine Barrens Tree Frogs at a second Double Trouble site.

July 4 --- A hastily organized trip, hoping to relocate a Gray Comma found earlier in the week, drew nine folks to Wawayanda State Park despite the heat and road-clogging, celebratory crowds. Unfortunately the Gray Comma was nowhere to be seen. We did manage to see Banded and Gray hairstreaks, a rather late Northern Cloudywing, 2 Appalachian Browns, and a wonderfully fresh Painted Lady. The afternoon was spent at the Canal Road area of Vernon, where the highlight was undoubtedly the 47 lovely Baltimore Checkerspots. Other notables were Coral Hairstreak, Hackberry Emperor, Northern Pearly-Eye, a very late first-brood Common Ringlet, and 8 Eyed Browns. The day's list was a respectable 28 species.

August 17 --- A species list of 21 butterflies is not great for mid-August. Few complaints were heard, however, considering that most of the 18 participants drove through rain to reach Willowood Arboretum. As we gathered in the parking lot the sun began to peek through and the swallowtails began flying. Silver-spotted Skippers were everywhere; our estimate of 100+ was very conservative. The 58 Tiger Swallowtails included several dark females, allowing excellent comparisons to the 35 Spicebush Swallowtails and single superb male Black Swallowtail. The field next to the parking lot produced a Painted Lady and Common Buckeye, and two very fresh Dun Skippers. The gardens at Fairview Farm were a bit disappointing. Last year at this time we noted 25 species; this year just 5. But we enjoyed the grounds and were able to identify some dragonflies by the pond. All in all a lot better than the rainy day we'd feared!

September 6 & 7 --- Sixteen members, led by Joe Burgiel, with lots of help from all present, attended our annual field trip to Cape May. The 45 species found set a record high for the trip (and Wade & Sharon added two more a day later)! Highlights included Cloudless Sulphur, three White M Hairstreaks, American Snout, Variegated Fritillary, amazing numbers of American and Painted Ladies, Long-tailed Skipper, Horace's Duskywing, Common Checkered Skipper, and no fewer than 5-7 Ocola Skippers. But the butterfly of the trip was undoubt-

Continued on p. 10 (Field Trips)

Overview of the North Jersey 2003 Butterfly Season

by Tom Halliwell

This past season generated a continued increase in both butterfly reports and reporters. Geographic coverage of northern New Jersey (encompassing Mercer and Monmouth counties north) was better than ever, helped by frequent submissions from previously underreported Mercer and Middlesex counties. The regular state-sponsored surveys of several Wildlife Management Areas were an additional welcome source of data (see article on p. 1).

It's hard to imagine how two butterfly seasons could be more dissimilar than the last two years. We recalled the drought and heat of 2002 somewhat nostalgically in the cool and overly wet spring of 2003. So while last year produced new early records for 40 species, butterflies this year posted 42 new late dates!

Weatherwise, the cold, snowy winter of 2002-2003 ushered in a cool and depressingly overcast spring. April and May offered rather few butterfly-friendly days, especially on weekends. Then it got worse; measurable rain fell on 16 of the first 23 days in June! As one would expect, this arrested all stages of butterfly development, and most of our spring and summer species emerged later than usual. Several species (e.g., Juniper Hairstreak, Hobomok Skipper) were also found in much lower numbers. Sun and warmth returned after June 23 and some butterfly populations responded immediately (e.g., Cabbage White, American Copper). July through September yielded about average temperatures, but precipitation was above normal, especially in early September. Since the appearance of so many species was skewed late, new latest-ever dates continued to be set through summer and fall.

As mentioned, numerous species were seen in lower numbers this year. For many spring and early summer butterflies this was, no doubt, caused by the cold and wet weather. However, some apparent population declines may have been due to the timing of Fourth of July Counts. This year the 4JCs, which typically generate many of our highest tallies, were too early for peak counts of the many later-emerging species.

Several rarities were found in 2003. A Harris' Checkerspot, identified in Morris County, had not been seen since 1999. Even rarer, a Sussex County Gray Comma was the first northern New Jersey sighting since 1983 (though one was a Cape May County first in 1999). Milbert's Tortoiseshells were discovered at four locations in Sussex County, the first since the big Wallkill River NWR irruption of 2001. And Queens, too, showed up at two locations, two years after the inaugural state record. These last, however, are unlikely to be natural vagrants to northern New Jersey.

With the exception of Ocola Skipper, which staged a big invasion, southern immigrants were not especially notable. Cloudless Sulphur, Little Yellow, American Snout, Variegated Fritillary, Painted Lady, Common Buckeye, Long-tailed Skipper, Common Checkered-Skipper, Fiery Skipper, and Sagem all made their appearance, but in rather small numbers, and mostly in the southern and coastal portion of our region.

Swallowtails appeared in big numbers this year. Pipevines were evident on the Palisades, while the common species

boomed in mid and late August.

Cabbage Whites had a poor spring, but exploded in June. Orange and Clouded sulphurs seemed to reverse their relative abundance; Orange Sulphurs were in poor muster until late summer. A spring sighting of Checkered Whites was exceptional.

American Copper totals were overwhelming at Big Brook Park in early summer, and Bog Copper was seen in Sussex County for the first time in several years. However, no Bronze Coppers were detected. Hairstreaks, as a group, were down, especially the usually common Banded and Striped hairstreaks. Oak Hairstreak went unreported. There were, however, four sightings of White M Hairstreak.

While Great Spangled Fritillaries had a poor year, Meadow Fritillaries flourished, and the Helmetta colony of Silver-bordered Fritillary appeared stable. Pearl Crescents produced big counts in central New Jersey this summer and Baltimore Checkerspots exhibited an outstanding season.

The downtrodden Brushfoots from 2002 rebounded nicely. Most were not up to the excellent numbers of 2001, but Question Marks and Eastern Commas were very common. Red-spotted Purple numbers exploded in Monmouth County in August, and Viceroy's had a banner year. Hackberry Emperors, too, did really well, but Tawny Emperors were scarce.

The Satyrs had a mixed year: Northern Pearly-eye, Eyed Brown, and Common Wood-Nymph seemed down, while Common Ringlet populations were excellent. Monarchs seemed to prosper during this breeding season, but, except for a brief, late push in mid-October, migration counts were rather low.

Silver-spotted Skippers displayed huge numbers in August, Southern Cloudywing produced a second brood for the second consecutive year, and Sleepy Duskywings were found in Middlesex and Sussex counties. Otherwise, spread-winged skippers had a poor year. Duskywing numbers were way down and Common Sootywing were not common.

It was a good season for a few of the regular grass skippers. The second brood of Swarthy Skipper flew in huge numbers at Big Brook Park. Cobweb and Indian skippers were up, and Broad-winged Skippers colonized several new *Phragmites* marshes (a mixed blessing). Most grass skippers, however, were down, some for the second year in a row. Least, European, Crossline, Delaware, Hobomok, Zabulon, Dion, and Dun skippers, as well as Northern Broken Dash, Little Glassywing, and Black Dash, were conspicuously less evident.

Enjoy the individual species snapshots which follow. They are the product of the cooperation and persistence of the many reporters listed at the conclusion of the species accounts. Please plan to submit regular reports of your butterfly outings in the coming 2004 season to <tbhalliwell@att.net> so that our understanding of northern New Jersey's butterflies can continue to grow.

Annotated List of Northern New Jersey Butterflies for 2003

compiled by Tom Halliwell

Pipevine Swallowtail Observed in good numbers from the Palisades; also found in Morris and Essex counties. Only one spring sighting: 5/31 (1) Boonton Twp., MOR [TM]. Summer reports from 7/20 (2) Greenbrook Sanctuary, BER [LG, AK] to at least 8/9 (17) Palisades Interstate Park, BER [TH, JB]. High count a stunning (75+) 8/4 Palisades Interstate Park [VC]. One autumn sighting: 9/27 (1) Alpine, BER [LG].

Zebra Swallowtail No reports since 2000.

Black Swallowtail Rather well reported, especially in central NJ. Seen initially 4/20 (1) Thompson Park, MON [KK]. Spring numbers somewhat better than recent years. Peak spring counts: (20) 5/19 Big Brook Park, MON [VC]; (8) 5/20 Thompson Park [VC]. Summer highs: (30) 8/31 Assunpink WMA, MON [CW, PW]; (23) 8/25 Thompson Park [KK]; (19) 7/19 Stony Brook-Millstone Reserve, MER [MC4JC]. Final sighting 10/16 (1) Big Brook Park [VC], tying latest-ever date.

Giant Swallowtail Last observed in 2000.

Eastern Tiger Swallowtail First seen 4/19 (1) Hilltop Reservation, ESS [KD]. Spring maximum (16) 6/6 Sourland Mts., SOM [PM, BM]. Excellent summer counts, especially in August: (87) 8/17 Assunpink WMA, MON [PW, CW, PB]; (58) 8/17 Willowood Arboretum, MOR [NABA]; (47) 8/25 Big Brook Park, MON [KK]. Last noted 10/11 (1) Belleville, ESS [VC], a new late date.

Canadian Tiger Swallowtail None reported since the 2001 first state record.

Spicebush Swallowtail Widely reported and in excellent numbers. First observed 5/1 (1) Waterloo, SUS [TH]. Spring high (10) 5/19 Big Brook Park, MON [VC]. August peak counts: (85) 8/17 Assunpink WMA, MON [CW, PW, PB]; (35) 8/17 Willowood Arboretum, MOR [NABA]; (26) 8/22 Cedar Ridge, MER [SM]; (26) 8/5 Schooley's Mt. Park, MOR [VC]. Sighted last 10/11 (1) Sandy Hook, MON [KK].

Checkered White Very surprising, though not unprecedented in the NYC area, was a spring report of (3) 4/16 at Sandy Hook, MON [KK]. This beat the previous northern NJ early date by more

than three months! Four fall individuals at Sandy Hook 9/21, 9/27, 10/19, & 11/3 [PB, SB, KK] were the only others. The 10/19 butterfly was found inside the Sandy Hook Bird Observatory building! The 11/3 sighting set a new late date by more than two weeks.

Cabbage White Initial sighting 3/23 (1) Neshanic Station, SOM [MP]. Spring counts unimpressive. Maximum: (103) 4/25 Big Brook Park, MON [KK]. Numbers mushroomed after extended June rains and again in late July–mid-August. Summer peak numbers: (4800) 8/7 Whittingham WMA, SUS [JB, MB]; (1000+) 8/2 Frankford Twp., SUS [TH]; (1000+) 6/24 Princeton, MER [CW]. Last seen at several locations on 11/21.

Falcate Orangetip Widely noted, but not in good numbers. First seen 4/20 (6) Mountainside Park, MOR [JS, JG]. Only double-digit counts: (20) 5/10 Mountainside Park [AK, PP, VN]; (19) 5/4 Assunpink WMA, MON [NABA]. Uncharacteristically, several reported into June; final one a latest-ever 6/17 (1) Sunrise Mt., SUS [JS].

Clouded Sulphur Reported in higher numbers than recent years. In many areas, Cloudeds outnumbered Orange Sulphurs for much of the year, reversing the typical situation. First noted 4/19 (1) Sandy Hook, MON [TJ]. Peak spring counts: (45) 5/15 Walkkill River NWR, SUS [AB]; (40) 5/19 Big Brook Park, MON [VC]. Top summer numbers: (75+) 9/20 Kittatinny Valley SP, SUS [TH]; (73) 6/27 Big Brook Park [KK]; (71) 7/12 Walkkill River NWR [WR4JC]. Last reported 11/22 (1) Swartswood SP, SUS [MB, et al.].

Orange Sulphur For much of the season, much less common than usual, often scarcer than Clouded Sulphur. Found initially 4/27 (4) Big Brook Park, MON [KK]. No spring reports reached double-digits. Good numbers by mid-August re-established normal Orange Sulphur predominance in central NJ; in northwest NJ, Cloudeds remained more common through the season. Highest summer counts: (442) 9/21 Assunpink WMA, MON [PW, CW]; (50+) 8/13–8/21 Big Brook Park [VC]; (50+) 8/13–9/17 Thompson Park, MON [VC]. Last seen 11/23 (1) Somerset, SOM [PW, CW].

Cloudless Sulphur Few reports; 1s and 2s noted from just three sites. The first, Rifle Camp Park, PAS, 7/7 (1) [VC], set a new early date. Sandy Hook, MON, provided several observations from 7/31 (1) [KK] to 10/11 (1) [KK]. Also found 9/21 (1) Little Silver, MON [KK].

Little Yellow Just three reports: 9/21 (2) Assunpink WMA, MON [CW, PW]; 9/21 (1) Swartswood SP, SUS [WW, SW]; and 9/27 (2) Sandy Hook, MON [JB, et al.].

Harvester Single individuals noted four times at Scherman-Hoffman Sanctuary, SOM, between 6/27 [MP] and 7/23 [MA]. This location has produced sightings for at least three consecutive years. No other reports.

American Copper Reported from Monmouth, Mercer, Morris, and Sussex counties only. First observed 4/25 (2) Big Brook Park, MON [KK]. Spring maxima: (60) 5/7 Sandy Hook, MON [TF, KWa]; (52) 5/19 Walpack Twp., SUS [KW, JS, TH]. Big Brook Park's population exploded spectacularly in late June: (4317) 6/27 [KK]; (1000s) 7/7 [KK]; and (100+) until at least 8/7 [VC]. Summer highs away from Big Brook Park: (260) 7/2 Sandy Hook [SH4JC]; (35) 9/10 Montague Twp., SUS [JB, TH]. Last observed 11/2 (2) Sandy Hook [KK], a new late date by more than a week.

Bronze Copper Not recorded since 1996.

Bog Copper Two locations reported. The Helmetta, MID, colony produced several sightings beginning 6/22 (6) [JS, CW, PW], a new early date. High counts there: (8) on 7/5 [TJ] & 7/12 [R4JC], the latter date the final one for the species. TNC's Mashipacong Bog Preserve, SUS, not visited in several years, held (4+) on a brief visit 7/8 [TH, MV].

Coral Hairstreak Reported from Monmouth, Middlesex, Morris, and Sussex counties, but in typically low numbers. Initially found 7/2 (9, the high count) Sandy Hook, MON [SH4JC]. Next highest total (7) Frankford Twp., SUS [S4JC]. Last noted 8/5 (1) Schooley's Mt. Park, MOR [VC], a new late date.

Acadian Hairstreak A site in Sparta Twp., SUS, remains the sole currently

known locale for this rare butterfly. Seen twice this year: 7/6 (2) [S4JC] and 7/12 (1) [TM], the latter a new late date.

Edwards' Hairstreak Observed at four Sussex County sites beginning 7/6: (4) Springdale and (2) Crater Lake Rd. [S4JC]. Peak count (11) 7/15 Sunrise Mt. [FW]. Also seen at Hamburg Mt. WMA 7/14 (1) & 7/19 (1) [KW]. Last found 8/2 (1) Sunrise Mt. [TH], latest-ever by more than a week. A hairstreak at Culver's Lake, SUS, on the remarkable date of 8/16 was thought to be this species, although too worn for positive identification [FW].

Banded Hairstreak Very poorly noted for the second consecutive year; reports received from just Sussex, Morris, and Essex counties. Initial sighting not until 7/2 (1) Walpack Twp., SUS [TF, KWa, et al.], and 7/2 (1) AT lands, Vernon Twp., SUS [JB, JZ, et al.]. Only double-digit count (12) 7/6 Fredon Twp., SUS [S4JC]. Last observed 8/13 (5) Walpack Twp., SUS [TH], a new late date.

Hickory Hairstreak Five Sussex and Morris county locations reported: 7/5 (1) Troy Meadows, MOR [GS4JC]; 7/5 (1) Great Swamp NWR, MOR [GS4JC]; 7/6 (2) Whittingham WMA, SUS [S4JC]; 7/8 (3) Rifle Camp Park, PAS [VC]; and 7/14 (1) Hamburg Mt. WMA, SUS [KW].

Striped Hairstreak Ten localities reported; all, however, just single individuals. First found 6/23 White Lake, WAR [JB, MB]. Last observed 8/14 Weldon Brook WMA, SUS [AB, TH], a record-late date by nearly a month.

Oak Hairstreak In a poor year for hairstreaks, this one was missed altogether. Last seen in 2002.

Brown Elfin Three sightings at two Sussex County locations. First seen 5/7 (3) Mecca Gap [TH, ABa]. Crater Lake Rd. produced the other two reports: 5/19 (13, a nice high) [JS, TH, KW] and 6/6 (4) [MB, JB].

Frosted Elfin Three reports from the Assunpink WMA, MON, colony this year: 5/4 (3) [NABA]; 5/7 (4) [TM]; and 5/12 (1) [JB, MB].

Henry's Elfin Reported rather briefly at Sandy Hook, MON, between 4/27 (5) [NABA] and 5/7 (6) [KWa, TF]. Peak count (19) occurred 4/30 [KK].

Eastern Pine Elfin A single report: 4/29 (3) Cheesequake SP, MID [RD]. This is a new early date, though not surprising since previous early dates were all from Sussex County.

Juniper Hairstreak Poorly reported from Monmouth, Somerset, Warren, and Sussex counties. Spring brood found from 5/2 (1) White Lake, WAR [TM] to 5/27 (1) Walpack Twp., SUS [JZ]. High count (8) 5/19 Walpack Twp. [JS, TH, KW]. Summer brood detected 7/30 (1) White Lake [JB, MB]. Peak count (6) 8/20 Sandy Hook, MON [KK], which was also the final sighting.

White M Hairstreak Four reports between 8/23 (1) Thompson Park, MON [VC], and 9/7 (1) Mountainside Park, MOR [JS, AB]. Other locations were: 9/5 (1) Hartshorne Woods, MON [KK] and 9/6 (1) Big Brook Park, MON [KK].

Gray Hairstreak Widespread, but in very low numbers. Initial report 4/25 (1) Big Brook Park, MON [KK]. Few spring sightings; maximum just (3) 4/29 Sandy Hook, MON [MB, JB]. More reports in summer but maximum still only (3) at several locations and dates. Noted last 11/2 (1) Sandy Hook [KK], a latest-ever date by more than a week.

Red-banded Hairstreak Found in Passaic, Essex, Somerset, Middlesex, and Monmouth counties. First brood rather scarce; noted between 5/29 (1) Somerset, SOM [PW] and 7/12 (1) Rocky Hill, SOM [R4JC]. High spring count (6) 6/22 Pigeon Swamp SP, MID [CW, PW, JS]. Summer brood more evident beginning 8/9 (1) Assunpink WMA, MON [CW, PW]. High counts: (16) 8/31 Assunpink WMA [CW, PW]; (13) 9/6 Big Brook Park, MON [KK]; (9) 9/10 Thompson Park, MON [VC]. Last seen 9/21 (1) Assunpink WMA [PW, CW].

Eastern Tailed Blue Seen first 4/21 (1) Thompson Park, MON [KK]. Spring high count (100+) 5/10 Mountainside Park, MOR [AK, PP, VN]. No other location remotely comparable. Summer numbers somewhat better, especially in central NJ: (100+) 7/29 Big Brook Park, MON [VC]; (54) 9/21 Assunpink WMA, MON [CW, PW]; (47) 8/29 Monroe Twp., MID [TJ]. Last noted 10/13 (2) Wallkill River NWR, SUS [AK].

Spring Azure complex Rather well-reported. Initially seen 4/12 (11) Helmetta, MID [TJ], and 4/12 (1)

Kittatinny Valley SP, SUS [TH]. Highest counts: (45) 4/21 Budd Lake, MOR [ABa]; (35) 4/27 Jenny Jump SF, WAR [JF, LF]; (35) 4/16 Great Swamp NWR, MOR [CM]. Last reported 6/2 (1) PVT @ Stillwater Rd., SUS [JB, MB].

"Summer Azure" First reported at three sites on 6/14: Hilltop Reservation, ESS (2) [KD]; Mt. Olive Twp., MOR (1) [TH]; and Willowood Arboretum, MOR (1) [JS]. Peak counts: (45) 8/2 Hatfield Swamp, ESS [KD]; (19) 8/5 Schooley's Mt. Park, MOR [VC]; (18) 7/26 Helmetta, MID [TJ]. Final observation 11/1 (1) Oxford Twp., WAR [TM], a new late date by nearly a month.

Appalachian Azure Six locations reported in Sussex, Morris, Hunterdon, Somerset, & Mercer counties. First seen 6/2 at both Mt. Joy, HUN (16) [TM], and Culver's Lake, SUS (3) [FW]. Peak count (21) 6/6 Sourland Mts., SOM [PM, BM]. Last seen at Culver's Lake site 6/26 (1) [FW], record-late by over three weeks.

Northern Metalmark Only two sites reported: PVT @ Stillwater Rd., SUS, from 7/6 (1) [S4JC] to 8/2 (2) [TH]; and White Lake, WAR, 7/30 (2) [JB, MB]. High count (26) 7/26 at PVT site [JB]. The 8/2 report is a new late date by more than a week.

American Snout A moderate flight of these southern immigrants produced sightings in Sussex, Warren, Somerset, Hunterdon, and, especially, Monmouth counties. First noted 7/17 (1) Thompson Park, MON [VC]. High counts: (19) 8/17 Sandy Hook, MON [KK]; (18) 9/17 Thompson Park [VC]. Seen as late as 10/13 (9) Sandy Hook [KK, VC].

Variegated Fritillary Not a big year for this immigrant; noted in Monmouth, Somerset, and Sussex counties only. However, two sightings in May antedate previous early date by two weeks: 5/19 (3) Big Brook Park, MON [VC], and 5/30 (1) Thompson Park, MON [VC]. Not seen again until 7/2 (1) Sandy Hook, MON [SH4JC]. High count (5) 8/23 Assunpink WMA, MON [PW, CW]. Final observation 10/21 (1) Somerset, SOM [PW].

Great Spangled Fritillary Widely noted, but in quite poor numbers. Initially found 6/22 (1) Pigeon Swamp SP, MID [JS, CW, PW]. Peak counts: (82) 7/12 Wallkill River NWR, SUS [WR4JC]; (50+) 7/14 Schooley's Mt. Park, MOR [VC]; (42) 7/5 Scherman-Hoffman Sanctuary,

SOM [GS4JC]. Last report 10/14 (1) Kittatinny Valley SP, SUS [TH, LGr], a new late date.

Aphrodite Three reports, all from Sussex County: 7/1 (1) Stillwater Twp. [SW, WW], 7/2 (1) Flatbrookville [TH], and 9/27 (1) Kittatinny Valley SP [TH], the latter a new late date by more than three weeks.

Silver-bordered Fritillary All reports this year from the Helmetta, MID, colony. First brood found 6/15 (2) [JS] to 7/30 (1) [TJ], with a peak of (10) 7/12 [R4JC]. Second brood observed 8/16 (5) [TJ] to 9/27 (7) [TJ]. The latter date is more than three weeks later than previous late date.

Meadow Fritillary Well reported from Sussex, Warren, Middlesex, and Monmouth counties. First seen 4/25 (1) Big Brook Park, MON [KK]. First brood noted through 5/19 (2) Walpack Twp., SUS [JS], but no reports reached double-figures. Second brood discovered 6/27 at Wallkill River NWR, SUS (6) [JB, TH], and White Lake, WAR (1) [TM]. Second brood maxima: (25) 7/6 Frankford Twp., SUS [S4JC]; (24) 7/6 White Lake [S4JC]. Last of second brood noted 7/12 (3) Wallkill River NWR [WR4JC]. Third brood first seen 7/29 at both White Lake (4) [TM] and Wallkill River NWR (10) [TH, KW]. Top counts of third brood: (29) 7/30 White Lake [JB, MB]; (22) 9/12 Wallkill River NWR [TH, HB]. Last seen 10/11 (3) Sandyston Twp., SUS [WW, SW, TH].

Harris' Checkerspot A pleasant surprise was this first northern NJ report in several years: 6/11 (1) Troy Meadows, MOR [VC]. This area has harbored the species in the past.

Pearl Crescent First reported 5/2 at both Sourland Mts., SOM (2) [PM, BM], and Sandy Hook, MON (1) [KK]. Spring top count (47) 5/15 Wallkill River NWR, SUS [AB]. Summer numbers, as usual, much better, especially so this year in central NJ: (450) 7/12 Skillman, MER [R4JC]; (328) 7/19 Stony Brook-Millstone Reserve, MER [MC4JC]. North Jersey peaked later: (120) 8/10 Whittingham WMA, SUS [WW, SW]. Last sighting 11/3 (1) Big Brook Park, MON [KK], a new late date.

Northern Crescent No reports since 1996.

Baltimore Checkerspot Observed at numerous locations in Sussex and

Warren counties. Initially found 6/27 (1) AT lands, Vernon Twp., SUS [KW]. Highest numbers: (55) 7/6 Frankford Twp, SUS [S4JC]; (47) 7/4 AT lands, Vernon Twp. [NABA]. Last seen two weeks later than previous late date: 8/2 (7) Hardyston Twp., SUS [ABa] and 8/2 (1) Frankford Twp. [TH].

Question Mark Rebounded very nicely from poor showing in 2002. First report: 4/19 (1) Great Swamp NWR, MOR [HB]. Scattered individuals until late June; thereafter relatively common through August. First summer form 6/2 (1) Colonial Park, SOM [PM]. Maxima: (12) 8/2 Hatfield Swamp, ESS [KD]; (10) 7/17 Thompson Park, MON [VC]; (10) 8/13 Walpack Twp., SUS [TH]; (10) 8/15 Duke Estate, SOM [SW, WW]. Orange winter form reported as early as 7/19 (1) Hatfield Swamp [KD]. Last noted 11/22 (1) Mountainside Park, MOR [JS], a new late date by nearly two weeks.

Eastern Comma First seen 3/21 (1) Kittatinny Valley SP, SUS [ABa]. Scarce until late June, then much more common than last year. This year's hot spot for the species was near the Delaware River in Montague Twp., SUS, where double-digit counts were routine between 6/28 (14) [TH] and 10/11 (10) [TH, WW, SW], with a top count of (24) 8/18 [MB, JB]. High counts away from Montague: (7) 8/13 Walpack Twp., SUS [TH] and (6) 8/3 Hatfield Swamp, ESS [KD]. Orange winter form flying by 8/6 (1) Montague Twp. [TH]. Last observed 11/27 (1) Lebanon, HUN [RY], a new late date by a week.

Gray Comma The first northern NJ sighting in many years: 7/1 (1) Wawayanda SP, SUS [TH]. Not found again despite much searching on the days following.

Compton Tortoiseshell Noted in Morris and Sussex counties only. Just two spring reports: 3/22 (1) Mountainside Park, MOR [JS], and 3/25 (1) Waterloo, SUS [LM]. Fresh adults found 7/5 at both Troy Meadows, MOR (1) [GS4JC], and Hawthorne Lake, SUS (1) [PG]. This summer emergence peaked with (3) 7/6 Walpack Twp., SUS [S4JC] and concluded with (1) 7/14 Hamburg Mt. WMA, SUS [KW]. Fall reports at two sites: Sunrise Mt., SUS (1) 9/24–10/13 [JZ, WW, et al.], and Fairview Lake, SUS (1) 10/11 [TS].

Mourning Cloak Spring reports of

overwintering individuals began 3/16 at Mt. Olive, MOR [ABa]; DeKorte Park, BER [JC]; and Montclair, ESS [ABe]. Highest spring numbers: (5) Hilltop Reservation, ESS [KD], and (5) 4/27 Chimney Rock, SOM [JS]. Newly emerged summer adults peaked at (6) 6/14 Hilltop Reservation [KD] and (6) 6/17 Rifle Camp Park, PAS [VC]. Late summer and fall reports mostly 1s and 2s; final observation 10/21 (1) Sunrise Mt., SUS [JZ].

Milbert's Tortoiseshell A pleasant surprise were four widely separated Sussex County sightings: 6/23 (3) Walpack Twp. [JB, MB]; 7/12 (1) Wallkill River NWR [WR4JC]; 10/14 (1) Kittatinny Valley SP [TH, LGr]; and 11/21 (1) Culver's Lake, SUS [FW]. The latter report is the latest ever by nearly six weeks.

American Lady Recovered from last year's abysmal showing, although not close to the huge numbers of 2001. Seen initially 4/16 (1) Sandy Hook, MON [KK], where sole double-digit spring count occurred: (15) 5/7 [TF, KWa]. By mid-July, Monmouth County locations reported good numbers; farther north, populations less evident, though widespread. Highest counts: (21) 7/20 & 8/9 Assunpink WMA, MON [PW, CW]; (21) 8/21 Big Brook Park, MON [VC]; (15) 9/19 Thompson Park, MON [VC]. Last spotted 11/21 (1) Culver's Lake, SUS [FW]. This is a new late date.

Painted Lady A modest flight scattered these visitors over the whole region, but in rather small numbers. A very fresh individual found 3/16 in Parsippany, MOR [JSm] may have been released or escaped. Its freshness on such an early date argues against its unassisted arrival. First sighting of natural immigrant: 5/7 (2) Sandy Hook, MON [TF, KWa]. Highest count: (10) 8/17 Assunpink, WMA, MON [CW, PW, PB]. Last seen 11/22 (1) Milford, HUN [RH, DH].

Red Admiral Significantly increased over last year. Earliest report 4/16 (1) Sandy Hook, MON [KK]. Sole double-digit spring count: (11) 5/15 Wallkill River NWR, SUS [AB]. Summer highs: (84) Wallkill River NWR [WR4JC]; (16) 7/5 Hatfield Swamp, ESS [KD]; (16) 7/2 Sandy Hook [SH4JC]. Last seen 11/22 (1) Oceanport, MON [CW], latest-ever by a week.

Common Buckeye A moderate influx produced reports from Monmouth, Mercer, Morris, and Sussex counties. First seen 7/19 (1) Pole Farm, MER [MC4JC]. Peak count (21) 8/19 Sandy Hook, MON [KK]. No other location reached double figures. Found last on 11/21 (1) Sandy Hook [KK], a new late date.

"White Admiral" Seven reports of individuals from five locations in Sussex and Middlesex counties: 6/24 Walpack Twp., SUS [JZ]; 6/28 & 8/16 Whittingham WMA, SUS [JB, MB, WW, SW]; 8/6 & 8/19 Montague Twp., SUS [TH, ABa]; 8/28 Stokes SF, SUS [FW], and 9/14 Helmetta, MID [TJ].

"Red-spotted Purple" Widely reported in impressive numbers. Initial sighting 5/12 (1) Thompson Park, MON [KK]. Top first-brood count: (38) 6/24 Walpack Twp., SUS [JZ]. Second brood common by late August, especially so in Monmouth County. Peak numbers: (112) 8/31 Assunpink WMA, MON [CW, PW, JS]; (75+) 9/19 Thompson Park [VC]. Final sighting 10/26 (1) Somerset, SOM [PW], a new late date.

Viceroy A superb year. First found 5/30 (1) at both Walkkill River NWR, SUS [AB], and Thompson Park, MON [VC]. Spring-brood reports only in 1s and 2s. Summer high counts excellent: (24) 9/7 Assunpink WMA, MON [CW, PW]; (18) 9/10 Thompson Park [VC]; (15) 7/26 Hatfield Swamp, ESS [KD]. Assunpink had double-digit counts from 8/31 to at least 9/21 [CW, PW]. Final observations 10/9 (1) at three sites: Thompson Park [VC]; Walkkill River NWR [TH]; and Helmetta, MID [TJ].

Hackberry Emperor A welcome recovery from a poor 2002, with good numbers from around the region. First seen 6/23 (1) at both Sourland Mts., SOM [PM, BM], and White Lake, WAR [TM]. Peak first-brood count: (27) 6/28 Montague Twp., SUS [TH]. Last of early brood: 7/17 (6) Thompson Park, MON [VC]. Second brood discovered 7/31 (1) Sandy Hook, MON [KK]. Highest second-brood numbers: (a remarkable 65) 8/18 Montague Twp. [MB, JB]; (20+) 8/28 Sandy Hook [KK]. Final sighting 9/27 (1) White Lake [SW, WW].

Tawny Emperor Reported in low numbers from eight sites in Monmouth, Hunterdon, Warren, & Sussex counties. Not found until 7/2 (1) Sandy Hook,

MON [SH4JC]. Top counts of first brood just (3) at Whittingham WMA, SUS 7/6 [S4JC], and Montague Twp., SUS 7/31 [TH]. First brood last observed 8/16 (1) Whittingham WMA [WW, SW]. Fresh second-brood individual seen 8/19 (1) Sandy Hook [KK]. Sandy Hook, which was, as usual, the only site reporting the second brood, peaked at (3) 8/28 [KK], and noted its last individual 9/11 (1) [KK, VC].

Northern Pearly-eye Though widely reported in Sussex and Warren counties, numbers much reduced from 2002. Initial sighting 7/1 (1) AT lands, Vernon Twp., SUS [TH], also the site of highest count: (6) 7/3 [AB, JS]. Last observed 8/13 (2) Walpack Twp., SUS [TH].

Eyed Brown Only five reports, all from the large colony at the AT lands, Vernon Twp., SUS. Observed between 6/27 (1) [KW] and 7/4 (8) [NABA]. Peak count (25) 7/3 [JS, AB].

Appalachian Brown Widely reported. First observed 6/16 (3) Troy Meadows, MOR [JS, AB]. High counts: (21) 7/12 & 8/29 Helmetta, MID [TJ]; (15) 8/17 Whittingham WMA, SUS [SW, WW]; (13) 7/6 Newton Meadows, SUS [S4JC]; (13) 8/31 Assunpink WMA, MON [PW, CW]. Last noted 9/14 (2) Helmetta [TJ], a new late date.

Little Wood-Satyr First noted 5/27 (1) White Lake, WAR [MB, JB]. Maximal first-brood counts: (100+) 6/15 Hardwick Twp., WAR [WW, SW]; (75+) 6/14 Hopatcong, SUS [TH]. Early brood observed at least until 7/6 [S4JC]. Summer brood out in central NJ by 6/29 (4) Thompson Park, MON [KK]. Second-brood highs: (125) 7/5 Troy Meadows, MOR [GS4JC]; (50+) 7/8 Rifle Camp Park, PAS [VC]. Last reported 8/6 (1) Montague Twp., SUS [TH].

Common Ringlet Excellent numbers in the species' stronghold of Sussex and Warren counties, but no reports farther southeast. Seen first 5/20 (1) White Lake, WAR [MB]. High numbers of first brood: (44) 6/2 PVT @ Stillwater Rd., SUS [JB, MB]; (20) 6/10 High Point SP [JZ]. Early brood last observed 7/15 (6) AT lands, Vernon Twp., SUS [VC]. Second brood discovered 7/29 (6) Kittatinny Valley SP, SUS [JB]. Maximum second-brood count: (43) 8/19 Old Mine Rd. @ Jager Rd., SUS [MB, JB]. Final sightings 8/31 at both

Old Mine Rd. @ Jager Rd. (7) [MB, JB] and Walpack Twp., SUS (2) [TH].

Common Wood-Nymph Widely reported, but in lower numbers than recent years. Initially found 7/1 (2) Stony Brook-Millstone Reserve, MER [SM]. High counts: (177) 8/7 Whittingham WMA, SUS [JB, MB]; (52) 7/12 Walkkill River NWR, SUS [WR4JC]. Seen last 9/20 (1) at both Somerset Environmental Ed. Ctr., SOM [BW], and Whittingham WMA [WW, SW].

Monarch More evident than last year. First encountered 5/13 (1) Assunpink WMA, MON [RR]. Just scattered reports until July. High non-migratory numbers: (21) 8/16 Whittingham WMA, SUS [WW, SW]; (20) 7/12 Walkkill River NWR, SUS [WR4JC]; (14) 8/9 Assunpink WMA [PW, CW]. Migration counts surprisingly low. Only triple-digit reports were from Montclair, ESS, on 9/7 & 9/8 (both 144) [EG] and Sandy Hook, MON, 10/14 (345) [KK] & 10/16 (400+) [VC]. The mid-October counts were quite late for so many. Last found 11/23 (1) Sandy Hook [JL, RL], a new late date by nearly two weeks.

Queen The second and third northern NJ records surprised observers at West Orange, ESS, in early June (2)[CaB], and at Assunpink WMA, MON 7/20 (1)[LB, CL, et al.]. Since the first NJ occurrence (7/17/01) there have been numerous additional reports in the mid-Atlantic region, generating much discussion about the origin of these butterflies. Has there been a dramatic increase in natural vagrancy, or do these sightings reflect human assistance? The West Orange Queens, at least, are known to be introduced. The observer [CaB] determined that their eggs were inadvertently included in a large number of Monarch eggs brought north from Florida, raised to adulthood in NJ, and released, with many Monarchs, onto Common Milkweed.

Silver-spotted Skipper Reported in very good numbers. Initially seen 5/4 (1) Assunpink WMA, MON [NABA]. Single-digit counts until late June. Huge numbers in August, especially in Monmouth County: (357) 8/24 Assunpink WMA [CW, PW]; (117) 8/25 Big Brook Park, MON [KK]; (100+) 8/23 Thompson Park, MON [VC]; (100+) 8/17 Willowood Arboretum, MOR [NABA]. The record-late final sighting was 10/13

(1) Helmetta, MID [TJ].

Long-tailed Skipper Two backyard garden sightings of this northern NJ rarity: 9/25 (1) Morristown, MOR [JG], and 10/7 (1) Helmetta, MID [TJ].

Hoary Edge Seven reports from six locations in Sussex, Morris, and Middlesex counties. Found initially 5/30 (2) Mountainside Park, MOR [AB]. Peak counts only (4) 6/29 Boonton Twp., MOR [TM] and (4) 7/6 Kittatinny Valley SP, SUS [S4JC]. Last noted 7/12 (2) South Brunswick, MID [R4JC].

Southern Cloudywing Six reports from two locations. A first-brood individual noted 7/5 (1) Great Swamp NWR, MOR [GS4JC]. Assunpink WMA, MON, yielded five observations between 8/2 (1) [CW, PW] and 8/31 (2) [PW, CW], with a peak of (5) 8/17 [CW, PW, PB]. This is only the third time a second brood has been seen in northern NJ; the first two were just last year! The 8/31 sighting is a latest-ever date.

Northern Cloudywing Reports received from Monmouth, Somerset, Morris, and Sussex counties. Observed first 5/27 (1) Wildcat Ridge WMA, MOR [CIB]. Sole double-digit count an excellent (25) 6/15 Swartswood SP, SUS [SW, WW]. Final sighting 7/4 (1) AT lands, Vernon Twp., SUS [NABA].

Dreamy Duskywing Seen first on 5/7 at both Assunpink WMA, MON (3) [TM], and Wantage, SUS (1) [WW, SW]. Highest counts: (27) 5/27 Wildcat Ridge WMA, MOR [CIB]; (21) 5/29 Jockey Hollow, MOR [CH]. Last observed 6/15 (3) Montague Twp., SUS [StW].

Sleepy Duskywing The Crater Lake Rd., SUS, colony discovered last year appeared healthy with (6) on 5/19 [JS, TH, KW]. Another individual was found at Helmetta, MID, also 5/19 [RD]. This date is a latest-ever for northern NJ.

Juvenal's Duskywing Widely reported but in poor numbers. First observed 4/27 (1) Kittatinny Valley SP, SUS [TH], and (1) Chimney Rock, SOM [JS]. Highest count (14) 5/4 Assunpink WMA, MON [NABA]; all others single-digits. Last sighting a record-late 6/28 (1) Montague Twp., SUS [TH].

Horace's Duskywing Only five reports from four locations: 7/19 (1) Princeton, MER [MC4JC]; 7/19 (1) Martin Tract, MER [MC4JC]; 8/2 (1)

Assunpink WMA, MON [PW, CW]; and 8/10 (2) Weldon Brook WMA, SUS [AB, JS]. Final sighting at Assunpink WMA 8/31 (1) [CW, PW].

Wild Indigo Duskywing Reported in very poor numbers this year. First seen 4/29 (2) Cheesequake SP, MID [RD]. Highest spring count just (3) 5/30 Wildcat Ridge WMA, MOR [CIB]. Summer counts a bit better: (29) 8/31 & 9/14 Assunpink WMA, MON [CW, PW]; (20) 8/6 Kenvil, MOR [JB, FT]. Last seen 10/14 (1) Somerset, SOM [PW].

Common Checkered-Skipper A very poor year, especially in contrast to 2002. Only six locations reported. Not found until 7/12 (2) Skillman, SOM [R4JC]. All reports just 1s and 2s. Last noted 10/9/(1) Wallkill River NWR, SUS [TH].

Common Sootywing Quite uncommon; only seven sites noted in Bergen, Somerset, Middlesex, Mercer, and Monmouth counties. First seen 5/12 (4) Thompson Park, MON [KK]. Peak counts: (6) 8/24 Assunpink WMA, MON [PW, CW]; (4) 7/17 Thompson Park [VC]. Not found after 8/31 (2) Assunpink WMA [CW, PW].

Arctic Skipper Four reports from the High Point SP, SUS, colony between 6/6 (2) [PG, TH] and 6/17 (1) [JB, MB, JS]. Highest count only (5) 6/10 [JZ].

Swarthy Skipper Just two sightings of the early brood: 6/27 (1) Big Brook Park, MON [KK], and 7/2 (9) Sandy Hook, MON [SH4JC]. Second brood more evident, but reported only in Monmouth, Middlesex, and Morris counties. Initially seen 7/26 (1) Helmetta, MID [TJ]. Peak numbers staggering at Big Brook Park: (200+) 8/18 [KK]; (117) 8/25 [KK]. Away from Big Brook, top count (15) 8/3 Assunpink WMA, MON [CW, PW]. Final observation 9/21 (1) Assunpink WMA [PW, CW], a new late date by more than a week.

Least Skipper Reported in lower numbers than previous two years. Not found until 6/13 (1) Stillwater Twp., SUS [SW, WW]. First brood high counts: (48) 7/5 Great Swamp NWR, MOR [GS4JC]; (35) 6/28 Hardyston Twp., SUS [JB, MB]. Last sighting of early brood 7/20 (1) Assunpink WMA, MON [CW, PW]. Second brood discovered 7/29 (1) Big Brook Park, MON [VC]. Maxima: (32) 8/13 AT lands, Vernon Twp., SUS [KW];

(32) 8/17 Assunpink WMA [PW, CW, PB]. Second brood last noted 9/30 (1) Wallkill River NWR, SUS [TH]. Fresh individuals among the (15) 9/20 Hatfield Swamp, ESS [KD], may indicate a partial third brood.

European Skipper Not seen until 6/15 (3) Big Brook Park, MON [VC]. Maxima: (300+) 6/28 Martin Tract, MER [SM]; (250) 7/5 Fosterfields, MOR [GS4JC]; (150) 6/29 Swartswood SP, SUS [MB, JB]. Last reported 7/13 (1) Alexahawkin WMA, HUN [SM].

Fiery Skipper Only five reports of this irregular visitor: 9/5 (1) Montclair, ESS [AB]; 9/17 (1) & 9/19 (2) Thompson Park, MON [VC]; 9/21 (1) Assunpink WMA, MON [PW, CW]; and 9/27 (3) Verona Park, ESS [KD].

Leonard's Skipper Observed at four Sussex County sites: Walpack Twp. 8/23 (4) [TH]; Weldon Brook WMA 8/24 (1) [AB]; Frankford Twp. 8/31 (1) [WW, SW]; and Fredon Twp. 9/11-9/25 (1-2) [SW, WW]. The 9/25 sighting is a new late date.

Cobweb Skipper A nice increase to five localities this year. First reported 5/10 (2) Mountainside Park, MOR [AK, PP, VN]. Also seen there 5/17 (7) [JS] & 5/30 (1) [AB]. A powerline in Boonton Twp., MOR, held (4) on 5/15 [TM] and (10, the high count) on 5/30 [TM]. Other sites were: High Mountain Preserve, PAS, 5/18 (8) [NABA]; Walpack Twp., SUS, 5/20 (1) [TH]; and Wildcat Ridge WMA, MOR, 5/19 (3) & 5/30 (3) [CIB]. The record-late final sighting was 6/8 (2) Boonton Twp. [JS, CW, PW].

Indian Skipper Well reported, but just from Sussex and Morris counties. Not found until 5/27 (1) Wildcat Ridge WMA, MOR [CIB]. Peak numbers: (20) 6/15 Swartswood SP, SUS [WW, SW]; (14) 6/6 Wildcat Ridge WMA [CIB]; (12) 6/8 Boonton Twp., MOR [CW, PW, JS]. Last sighting: 6/30 (1) Swartswood SP [TH], a new late date.

Peck's Skipper Seen initially 5/30 (1) at both Springdale, SUS [TH], and AT lands, Vernon Twp., SUS [AB]. Top count of first brood: (12) 6/22 Pigeon Swamp SP, MID [JS, CW, PW]. Early brood last noted 7/14 (4) Schooley's Mt. Park, MOR [VC]. Second brood more numerous. First found 8/2 (1) at both Assunpink WMA, MON [CW, PW], and Kenvil, MOR [JS, MP]. Peak numbers of

second brood: (52) 8/22 Cedar Ridge, MER [SM]; (38) 8/20 Martin Tract, MER [FB, SM]; (35) 8/23 Frelinghuysen Arboretum, MOR [JG]. Final sighting 10/16 (1) Somerset, SOM [PW]. This last, a fresh individual, was the only hint of a possible third brood this year.

Tawny-edged Skipper First brood noted between 6/2 (1) Kittatinny Valley SP, SUS [JB], and 7/12 (1) Skillman, SOM [R4JC], with peak count of just (6) 6/15 Swartswood SP, SUS [SW, WW]. Initial report of more-numerous second brood 7/23 (1) Mahwah, BER [CM]. High counts of later brood: (50+) 8/13 & 8/21 Big Brook Park, MON [VC]; (35) 8/31 Stillwater Twp., SUS [WW, SW]. Last observed 9/27 (1) Kittatinny Valley SP [TH].

Crossline Skipper Relatively few reports. First encountered 6/15 (1) Helmetta, MID [JS]. High first-brood count just (4) 7/30 Walpack Twp., SUS [MB, JB]. Last unambiguous first-brood sighting: 8/12 (2) Swartswood SP, SUS [TH]. Second brood initially found 8/17 (1) Martin Tract, MER [FB]. Assunpink WMA, MON, yielded a good second-brood high of (12) 8/31 [CW, PW], and a final sighting of (2) 9/14 [PW, CW]. Then there was the intriguing puzzle of a crisply fresh individual in Fredon Twp., SUS, 8/13-8/15 [WW, SW]; was it a late-emerger from the early brood, or a precocious second-brood individual?

Long Dash Reported from nine locations in Sussex, Warren, and Morris counties. Initially sighted 6/14 (4) Willowood Arboretum, MOR [JS]. Peak counts: (12) 6/24 Kittatinny Valley SP, SUS [MB]; (8) 6/23 Swartswood SP, SUS [JB, MB]. Individuals seen on the 7/5 GS4JC at Troy Meadows, MOR, and Harding Twp., MOR, established a new late date.

Northern Broken-Dash Widely reported but in poor numbers. Noted initially 6/23 (1) Swartswood SP, SUS [MB, JB]. High counts: (36) 7/5 Great Swamp NWR, MOR [GS4JC]; (22) 7/5 Troy Meadows, MOR [GS4JC]; (18) 7/19 Martin Tract, MER [MC4JC]. Last observed 9/6 (1) Thompson Park, MON [KK].

Little Glasswing Numbers even lower than last year's unspectacular showing. First seen 6/22 (1) Pigeon Swamp SP, MID [JS, CW, PW]. Maxima: (78) 7/5 Troy Meadows, MOR [GS4JC];

(54) 7/5 Great Swamp NWR, MOR [GS4JC]; (22) 7/19 Martin Tract, MER [MC4JC]. Last noted 8/10 (3) Weldon Brook WMA, SUS [AB, JS].

Sachem Dramatically down from the past few years. Only nine locations reported in Monmouth, Middlesex, Somerset, Essex, and Morris counties. First seen 7/5 (1) Scherman-Hoffman Sanctuary, SOM [GS4JC]. Not found again until 8/9 (1) Montclair, ESS [AB]. This was followed by another gap, then ten September reports peaking at (3) 9/21 Assunpink WMA, MON [CW, PW]. Final observation 10/13 (1) Sandy Hook, MON [VC].

Arogos Skipper Five reports from two Morris County sites. At Kenvil, sightings noted 7/14 (8, the high count) [TM]; 7/21 (4) [TM]; 7/30 (1) [TH]; and 8/2 (1) [JS, MP]. Ironia held one 8/2 [JS, MP]. The 8/2 sightings are new late dates by more than a week.

Delaware Skipper Widely reported but in low numbers. Noted initially 6/24 (1) Wallkill River NWR, SUS [KW]. Only two double-digit counts: (16) 7/16 Wallkill River NWR [WR4JC]; and (11) 7/26 High Point SP, SUS [TH]. Final sighting a record-late 8/6 (1) Montague Twp., SUS [TH, et al.].

Mulberry Wing Found in Essex, Middlesex, Morris, & Sussex counties, but not until 7/12 (3) Helmetta, MID [R4JC], and 7/12 (1) Sparta Twp., SUS [TM]. Peak numbers: (45) 7/26 High Point SP, SUS [TH]; (12) 7/26 Helmetta [TJ]; (6) 8/5 Wantage Twp., SUS [WW, SW]. Final sighting 8/26 (1) High Point SP [TH], a new late date by two weeks.

Hobomok Skipper Not found until 5/27 (1) Wildcat Ridge WMA, MOR [CIB]. Maximal counts quite poor: (21) 6/6 Wildcat Ridge WMA [CIB]; (16) 6/10 High Point SP, SUS [JZ]. Last noted by several parties on the 7/6 S4JC, SUS.

Zabulon Skipper Reported in low numbers this year. Early brood noted 5/30 (1) Plainsboro Preserve, MID [PW], to 7/12 (1) Wallkill River NWR, SUS [WR4JC], with a peak count of only (3) 7/6 Whittingham WMA, SUS [S4JC]. Second brood first seen 8/5 (1) Schooley's Mt. Park, MOR [VC]. Top numbers just (9) 8/17-8/31 Assunpink WMA, MON [CW, PW]; (8) 8/13 Big Brook Park, MON [VC]. Seen last 10/9 (1) AT lands, Vernon Twp., SUS [TH].

Broad-winged Skipper More widely reported than usual. First noted 7/20 (1) Hatfield Swamp, ESS [KD]. Top counts: (50+) 8/3 DeKorte Park, BER [KD]; (32) 8/20 Wallkill River NWR, SUS [KW]; (20+) 8/23 Thompson Park, MON [VC]. Final sighting 9/12 (5) Rifle Camp Park, PAS [VC].

Dion Skipper Just a single report: 7/12 (2) Whittingham WMA, SUS [TM]. This no doubt reflects a lack of searching this year rather than a decline in the species.

Black Dash Rather low numbers reported from Sussex, Morris, Essex, & Middlesex counties. Initial observation 7/4 (1) Helmetta, MID [TJ]. High counts: (13) 7/12 Sparta Twp., SUS [TM]; (12) 7/12 Helmetta [TJ]; (7) 8/4 Whittingham WMA, SUS [TH]. Last sighting record-late by three weeks: 8/24 (1) Stillwater Twp., SUS [MB, JB].

Dun Skipper First encountered 6/27 (1) Big Brook Park, MON [KK]. Peak numbers of early brood rather low: (25) 7/30 Hamburg Mt. WMA, SUS [KW]; (18) 7/26 High Point SP, SUS [TH]. Last of first brood 8/26 (1) High Point SP [TH]. Second brood noted by 8/13 (25+, the high count) Big Brook Park [VC]. Additional high count (23) 8/21 Thompson Park, MON [VC]. Last observed 9/30 (1) Somerset, SOM [PW].

Dusted Skipper Seven reports from six locations in Sussex and Morris counties. Earliest: 5/27 (1) Wildcat Ridge WMA, MOR [CIB], where peak count tallied 6/6 (8) [CIB]. Last seen 6/15 (3) Montague Twp., SUS [StW], a new late date.

Pepper and Salt Skipper Three reports from the High Point SP, SUS, colony between 6/10 (3) [JZ] and 6/17 (4) [JS, MB, JB]. Highest count just (5) 6/15 [StW, TH].

Common Roadside-Skipper Last seen in 2001. The Yard's Creek site remains off limits.

Ocola Skipper A banner year for this normally rare immigrant; at least 15 reports from 11 sites. First detected at three locations on 8/23: Frelinghuysen Arboretum, MOR (2) [JG]; Assunpink WMA, MON (1) [CW, PW]; and Fredon Twp., SUS (1) [SW, WW]. Peak count an excellent (5) 9/21 Assunpink WMA [PW, CW]. Final observation 10/13 (1) Somerset, SOM [PM].

Contributors: The following people contributed sightings for this report. Those with initials in parentheses are cited in the text.

M. Anderson (MA), P. Bacinski (PB), F. Bader (FB), A. Barlow (ABa), S. Barnes (SB), M. Barrett (MB), A. Baytas (AB), L. Beck (LB), A. Bernzweig (ABe), Ca. Bernzweig (CaB), Cl. Bernzweig (ClB), D. Briede, J. Burgiel (JB), H. Burk (HB), D. Burnside, J. Collins (JC), V. Corsello (VC), K. Dedrick (KD), R. Dutko (RD), T. Fiore (TF), J. Flynn (JF), L. Flynn (LF), L. Gebhardt (LG), J. Glassberg (JG), M. Gochfeld, P. Grannis (PG), E. Greenstone (EG), L. Groves (LGr), T. Halliwell (TH), L. Harding, D. Harrison (DH), R. Harrison (RH), C. Huebner (CH), T. Jawdzik (TJ), K. Keating (KK), W. Koenig, A. Koster (AK), C. Leck (CL), J. Lesko (JL), R. Lesko (RL), L. Matula (LM), C. Mayhood (CM), T. McBride (TM), S. Mitchell (SM), B. Murray (BM), P. Murray (PM), V. Nixon (VN), L. Peskac, P. Pfeifer (PP), F. Pfeifer, M. Pollock (MP), R. Roscioli (RR), J. Smith (JSm), J. Springer (JS), T. Sudol (TS), M. VanClef (MV), K. Wallstrom (KWa), S. Walter (StW), S. Wander (SW), W. Wander (WW), F. Weber [Tetlow] (FW), D. Wentink, B. White (BW), P. Williams (PW), C. Williams (CW), K. Witkowski (KW), R. Yaros (RY), J. Zamos (JZ).

Other citations:

NABA North Jersey Butterfly Club field trip (NABA), Great Swamp Fourth of July Count (GS4JC), Mercer County Fourth of July Count (MC4JC), Raritan Fourth of July Count (R4JC), Sandy Hook Fourth of July Count (SH4JC), Springdale Fourth of July Count (S4JC), Wallkill River NWR Fourth of July Count (WR4JC)

Abbreviations: All locations mentioned include the first 3 letters of the county in capital letters unless that location has already been cited for that species. Other abbreviations: AT = Appalachian Trail, NWR = National Wildlife Refuge, PVT = Paulinskill Valley Trail, SF = State Forest, SP = State Park, TNC = The Nature Conservancy, WMA = Wildlife Management Area

Summary (continued from p. 1)

indication of the late season was the 818 European Skippers, which swamped the six found in 2002.

Four new species were found on the Sandy Hook Count, raising to 29 the total number of species found in the two years of this limited range count. The Wallkill NWR count had an average number of species, 34, with slightly fewer than 1,000 individuals, half of which were Cabbage Whites. The report of a single Baltimore Checkerspot on the Great Swamp count echoed the only previous report of this butterfly on this count, in its debut year of 1994. Mulberry Wings and Dion Skippers were missed at Great Swamp for the first time ever, and only a lone Black Dash prevented this species from being skunked.

Also in contrast to last year, when 126 Sachems were seen on three separate counts, this year just one Sachem was reported. Furthermore, no Dion Skippers were seen this year on any of the northern NJ counts, presumably because the cool weather delayed their emergence beyond the normal count dates.

Even though there is pretty good coverage in northern NJ, we encourage people to consider starting new counts. Warren and Hunterdon Counties still have a number of great butterfly areas and are only peripherally included in existing count circles. Any takers?

Field Trips (continued from p. 2)

ly the very late, slightly worn, Rare Skipper. Although uncooperative about showing its upper wing surfaces, this individual had a small portion of its right hind wing missing, giving us a clear view of the pale transverse bands marking the joints between its abdominal segments. This mark allowed us to rule out the possibility of an unusually tan Delaware Skipper. While we found no one who could quote us a late date for Rare Skipper, local Cape May butterflyers normally consider this to be a July species!

September 13 --- Given the horrid forecast, and the continuous deluge on the drive down, the fact that this field trip at Sandy Hook even took place was remarkable! The five nutters who showed up (including leader Tom Halliwell) didn't get rained on and actually saw six butterfly species in the gloom (highlighted by a "basking" Hackberry Emperor). The 12 warbler species also helped to brighten the day.

But best of all was the immense Hickory Horned Devil—larva of the Royal Walnut Moth (aka Regal Moth)—found by a group of soggy Boy Scout campers. This is one serious caterpillar! More than four inches long, with the diameter of a quarter, its coloration, horns, and other protuberances combine to produce a truly fearsome appearance. It sure made our day!

WMAs (continued from p. 1)

tic" surveys the observer does not stick to a predetermined transect, but walks wherever he or she wants—the "random" part—investigating any interesting-looking areas that turn up (for example, a nice big patch of Milkweed or a field of Little Bluestem grass)—the "opportunistic" part.

In 2003 ENSP asked NABA to survey the Assunpink, Black River, Colliers Mills, Hamburg Mountain, Weldon Brook, and Whittingham WMAs. Because the project did not get underway until summer (equipment and data sheets were delivered at the Springdale 4JC wrapup), we were to survey each WMA once in July-August and once in September, and then early- and late-spring surveys would be done in 2004. Theoretically, there was to be a main observer for each WMA, who would be assisted in the field by volunteers. The main observers were: Paula and Chris Williams for Assunpink and Colliers Mills, Jim Springer for Black River, Ken Witkowski for Hamburg Mountain, Ahmet Baytas for Weldon Brook, and Sharon and Wade Wander for Whittingham. A number of other members assisted with the surveys: Michael Pollack at Black River; Fred Weber, Tom Halliwell, and especially Marge Barrett and Joe Burgiel at Whittingham; Tom Halliwell (and Jim Springer) at Weldon Brook; and Pete Bacinski, Patti Murray, and Bert Murray at Assunpink (thanks to all of you!). We had hoped to involve even more people, but that goal went underachieved. Part of the problem was the late start, which came just as many of us were heading off to vacation! In most cases, surveys didn't get underway until August, and the captains had first to reconnoiter their WMAs in order to discover access points and decide which areas within the WMA to survey. (Many of the WMAs are very large, and just learning your way around is a challenge.) It was a asking a bit much to also schedule and supervise

volunteer assistants (many of whom also had vacation plans).

The lead surveyors provided the following brief overviews of the WMAs that they surveyed, with highlights of the butterflies seen during visits in the latter half of the summer and the early fall:

Hamburg Mountain (2775 acres in northeastern Sussex County): Habitats are largely forested, with only a few openings within the forest and along dirt access roads. There is some open wetland near Silver Lake. Edwards' and Hickory hairstreaks, Northern Pearly-eye, Compton Tortoiseshell, Broad-winged Skipper, and Mulberry Wing were the noteworthy species.

Assunpink (5838 acres in western Monmouth and eastern Mercer counties): We surveyed 11 areas surrounding 2 major lakes. Habitats consisted of large and small fields, a large swamp filled with Buttonbush, and dirt roads/parking lots. There were lots of invasive species in the fields (Autumn Olive, Multiflora Rose, and others) and some that had seen herbicide use. We spent most of our time surveying fields that had good nectar sources (Purple Loosestrife in the wet fields, Spotted Knapweed, and Field Thistle in the drier fields. Buttonbush and Sweet Pepperbush proved very productive along lake edges. One field, the highest point around, was great for hilltopping butterflies (it also contained the greatest amount of Little Bluestem grass). There were some surprises among the 47 species tallied, but we were really amazed at the high numbers of swallowtails (especially Eastern Tiger), Red-spotted Purples, American Ladies, and Silver-spotted Skippers. Surprises were Common Sootywing, Broad-winged Skipper, Little Yellow, Meadow Fritillary, Fiery Skipper, and Ocola Skipper.

Black River (3040 acres in western Morris County, north of Chester). This WMA consists of mostly upland forest with some swampy woodlands surrounding a large freshwater marsh (unfortunately difficult to access and overgrown with Purple Loosestrife) straddling the Black River. Interspersed in the upland woodlands are numerous upland fields. Most of the fields are overgrown but access to the perimeter and center of the fields is straightforward because of mowed paths. Some of the best nectar sources in the fields were Wild Bergamot and various thistles. However, the best butterflying was along the wide power line cut that runs roughly parallel to the river along the southern side of the WMA. Some excellent bluestem grass patches along this power line cut will bear watching closely. The species list so far is only a modest 24 species but should improve substantially next year when the area can be surveyed in prime butterflying season. Cabbage Whites, Pearl Crescents, Silver-spotted Skippers and Peck's Skippers had the highest counts. American Coppers, Appalachian Browns and an invasion-year Ocola Skipper were the highlights.

Colliers Mills (12,653 acres in northwestern Ocean County): This area presented a great challenge because it is so large. We surveyed 7 areas, which consisted of large tracts of forest interspersed with fields of mostly non-native grasses, lake edges, a cranberry bog, dirt roads, and a power line cut. We devoted most of our time trying to find nectar sources. These included Buttonbush, Sweet

Pepperbush growing in wet areas or along lakes or ponds, roadside Spotted Knapweed, and Common Milkweed and vetches found in open areas. We had a total of 40 species. Our standouts included large numbers of Broad-winged Skippers (for what seemed to be a small stand of *Phragmites*) and Red-spotted Purples. Surprises included finding Dotted Skipper in a large field of Little Bluestem away from the known spot (in August!) and an old Dion Skipper in the cranberry bog site.

Weldon Brook (1256 acres in eastern Sussex County): Adjacent to Mahlon Dickerson Reservation, this WMA consists mostly of dense deciduous woodland, and seems poor in butterflies. However, a power line cut on the eastern side of the WMA, which extends from its northern tip to its southern edge, creates some good habitat for butterflies. Most of the surveys were done along this cut, walking it from one end to the other, though with occasional forays into the woodland trails. The southern side of the power line cut is mostly dry, partly overgrown upland habitat that resembles that in Mountainside Park. The main nectar sources during the late summer and early fall were Spotted Knapweed and Wild Bergamot. Two Horace's Duskywings were seen here in early August. In the middle and northern parts of the WMA, the power line cut passes near some wetlands and marshy areas as well as more dry openings, bordered by woodland on both sides. Many of the 30 species seen in the WMA so far were observed there, including a Leonard's Skipper, and wetland species such as Broad-winged Skipper, Black Dash, and Mulberry Wing (it will be interesting to see if Dion Skipper is there). Jim Springer and I also found a Leonard's Skipper just outside the northern edge of the WMA.

Whittingham (1930 acres in southern Sussex County): The perimeter of this WMA is divided into numerous large, upland fields (many of which are seriously overgrown with Autumn Olive, Morrow Honeysuckle, Teasel, and other invasives). Much of the interior is upland forest, and extensive forested and herbaceous wetlands border the West Branch of the Pequest River, which traverses the tract from southwest to northeast. We surveyed nine mostly herbaceous upland fields, one open fen (a sedge-dominated marsh on limestone soils), and several dirt roads/parking areas. Wild Bergamot, Spotted Knapweed, thistles, goldenrods, and Heal-all were the main late-summer nectar sources. There were no stunning surprises among the 36 species observed, but Juniper Hairstreak, American Snout, Hackberry and Tawny emperors, Northern Pearly-eye, Common Ringlet, and Mulberry Wing were standouts. We also had one "White Admiral" (not counted as a separate species). Cabbage Whites, Pearl Crescents, and Common Wood-Nymphs were particularly numerous.

We're all looking forward to completing the spring and summer surveys for these WMAs in 2004. At this point, it looks as though the surveys of a new set of WMAs may start in the spring of 2005, so that we can do all of the observations for those in the same year, which certainly seems more desirable. We hope to do better in 2004 at achieving our goal of engaging more chapter members in conducting these surveys. There should be lots more interesting butterflies to find out there, and new areas to explore, so we'd welcome new participants.

4th of July Butterfly Counts - 2003

	LAKEHURST (6/28)	SANDY HOOK (7/2)	GREAT SWAMP (7/5)	SPRINGDALE (7/6)	RARITAN (7/12)	WALLKILL NWR (7/12)	MERCER CO. (7/19)
Black Swallowtail					23	17	37
Eastern Tiger Swallowtail	14	4	10	27	13	6	19
Spicebush Swallowtail	43	2	7	37	7	4	2
Cabbage White	94	220	408	943	523	509	1472
Clouded Sulphur	1	1	24	73	14	71	32
Orange Sulphur	38	68	41	20	75	7	46
Harvester			1				
American Copper	415	260			5		
Bog Copper	80				8		
Coral Hairstreak	3	9	7	12	1	1	
Acadian Hairstreak				2			
Edwards' Hairstreak				6			
Banded Hairstreak	48		20	28		1	
Hickory Hairstreak			3	2			
Striped Hairstreak	4		1		2		1
Oak Hairstreak	1						
Gray Hairstreak	1						1
Red-banded Hairstreak	4				1		
Eastern Tailed Blue	123	20	34	13	46	5	71
"Summer" Azure	17	21	31	23	2	1	58
Northern Metalmark				1			
Variegated Fritillary		1					
Great Spangled Fritillary			133	126	22	82	31
Silver-bordered Fritillary	1				10		
Meadow Fritillary				51		3	
Pearl Crescent	1		6	2	582	8	689
Baltimore Checkerspot			1	103		4	
Question Mark	5	5	15	14	10	3	14
Eastern Comma			5	7		3	1
Compton Tortoiseshell			1	4			
Mourning Cloak		1	3	3	2		2
Milbert's Tortoiseshell						1	
American Lady	75	4	7	8	3	5	3
Painted Lady		1		1	1	1	
Red Admiral	1	16	28	32	16	84	40
Common Buckeye	1						1
"Red-spotted Purple"	11			16			12
Viceroy			1	4	1		1
Hackberry Emperor				1	1		
Tawny Emperor		1		4			
Northern Pearly-Eye				12		3	
Appalachian Brown	1		18	23	15	1	
Little Wood-Satyr	13	20	283	33	27	9	47
Common Ringlet				1			
Common Wood-Nymph			38	12	46	52	383
Monarch	1		9	19	9	20	25
Silver-spotted Skipper	23	10	49	65	25	8	18
Hoary Edge	2			6	2		
Southern Cloudywing	6		1				
Northern Cloudywing	14						
Horace's Duskywing							2
Wild Indigo Duskywing					7		6
Cloudywing/Duskywing sp.				1			
Common Checkered Skipper					2		
Common Sootywing					1		1
Swarthy Skipper	16	9					
Least Skipper	2		121	85	12	5	3
European Skipper	7		381	818	1	14	
Dotted Skipper	7						
Peck's Skipper	2		32	7		2	
Tawny-edged Skipper	15		1		1		
Crossline Skipper	32		3	2			2
Long Dash			2				
Northern Broken Dash	1	3	96	4	35	1	43
Little Glassywing	9		271	42	11	5	52
Sachem			1				
Delaware Skipper			10	3	12	16	1
Mulberry Wing					3		
Hobomok Skipper			3	10			
Zabulon Skipper	2		6	3		1	
Black Dash			1		7		
Dun Skipper	5		29	4	16	1	16
TOTAL SPECIES	40	20	42	47	41	34	33
TOTAL INDIVIDUALS	1139	676	2142	2713	1600	954	3132