

THE PEARLY-EYE 2001

Field Reports of the NABA-North Jersey Butterfly Club

Volume I

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First Record of the Canadian Tiger Swallowtail (*Papilio canadensis*) in New Jersey

by David Wright

A male specimen matching the phenotypic features of the Canadian Tiger Swallowtail was discovered by Sharon Wander and Deedee Burnside along Rt. 23 in High Point SP, Sussex Co., NJ, on 9 June 2001. The specimen identity was verified by the following distinguishing characteristics: (1) the submarginal row of yellow spots on the underside of the forewing forms a continuous band, (2) the black band along the anal margin on the underside of the hindwing is $\geq 50\%$ the width of the anal cell, and (3) the junction between the postmedian yellow field and outer markings on the underside of the hindwing is delineated by a straight vertical black line. By contrast, in the sibling Eastern Tiger Swallowtail (*Papilio glaucus*), the ventral forewing submarginal yellow band is interrupted by black scaling and thereby non-continuous, the black band in the ventral hindwing anal cell is $< 50\%$ width of the cell, and the yellow field in the ventral hindwing is separated from outer markings by a scalloped vertical black line. The date of collection of the above specimen (June 9) is between the first and second flights of the multi-brooded Eastern Tiger Swallowtail and coincides with the peak flight period of the single-brooded Canadian Tiger Swallowtail known to occur in nearby northeastern Pennsylvania (Pocono Mts.) and southeastern New York (Shawangunk Mts.). The discovery of the Canadian Tiger Swallowtail had been anticipated in New Jersey, especially in the higher elevations of Sussex County with forest habitats. The specimen was found at approximately 1320 feet elevation. Future field study is needed to determine if the individual was part of a resident population or migrated into the state.

Long considered two subspecies of one broadly distributed species, the Canadian and Eastern Tiger Swallowtails were separated into two distinct species in 1992, based on differences in ranges, adult characters, broodedness, larval characters, and larval host preferences. The primary larval hosts of the Canadian Tiger Swallowtail are aspen (*Populus* sp.) and birch (*Betula* sp.), which are toxic to the Eastern Tiger Swallowtail. The primary larval host of the Eastern Tiger Swallowtail is Tulip

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The Arogos Skipper Caper

by Wade & Sharon Wander

The good news is that Arogos Skipper (a candidate for federal Threatened status) has not joined the ranks of extirpated New Jersey butterflies like Regal Fritillary, Mitchell's Satyr, and Grizzled Skipper—at least not yet, anyway. In 2001 we found from a few to as many as 20 of these little orange butterflies (think a little duller and a little smaller Delaware Skipper, with prominent white terminal fringes to both wings and white scaling along the veins of the underside of the hindwing) in several fields in Morris County. This adds to our short list of sites that we discovered last year. The bad news is that the total population, at least in north Jersey, appears to be quite small and confined to a very small area.

Historically, Arogos Skipper was found in at least 9 counties in New Jersey, but it had not been reported since 1974 until it was rediscovered at one site in Morris County, and at one site in Ocean County, in 1995. In 2000 and 2001 we surveyed several sites that supported suitable Arogos Skipper habitat (fields with Little Bluestem grass) near the location of the 1995 sighting. Although we tried to select good-looking sites, there was of course no guarantee that we would find our quarry and we pegged our chances of success at less than 50-50. It was with this mindset that we and Tom Halliwell walked into our first field on a hot day in early July, 2000. And there, nectaring so intently on one of the violet blooms of a Spiked Lobelia, was a very fresh Arogos Skipper—the first one we had ever seen! What luck! We subsequently found a few more Arogos Skippers in this field and in 2 other fields nearby. Several other NABA members enjoyed seeing and photographing this rare, but very cooperative, little skipper. (When nectaring, they seem almost oblivious to ogling observers and looming lenses!) This year, at the end of a long day of fruitless searching, we decided to check one last, not-very-promising

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NABA-North Jersey 2001 Field Trip Reports

April 28 --- Club president Chris Williams led 9 club members on this early trip to Sandy Hook. While the group saw only 13 species, there were some excellent highlights: 5 Falcate Orangetips, 100+ American Coppers, 16 Henry's Elfins, 4 Juniper Hairstreaks, 1 stunningly fresh Gray Hairstreak, and 50+ American Ladies. Most especially, it was just great to get out and see butterflies!

May 5 --- 11 folks attended the "Elfin trip" to Warren Grove, Chatsworth, and Assunpink led, once again, by Chris Williams. An excellent sampling of early spring specialties was observed including: 29+ Brown Elfins, 100 Hoary Elfins, 1 Frosted Elfin, 2 Hessel's Hairstreaks, 26 Dreamy and 5 Sleepy Duskywings (good ID comparisons), 1 Common Sootywing, and 3 Cobweb Skippers.

June 9 --- Led by Sharon and Wade Wander, the High Point S.P. trip attracted a record 26 members and friends. Of the 31 species found, highlights included the 25 Pepper & Salt Skippers and 20 Arctic Skippers at their only reliable locale in New Jersey. If not record highs, these are at least excellent maxima. The four Indian Skippers and four Long Dashes made for good ID studies, and the 10 Common Ringlets and 35 Hobomok Skippers were fine counts. The lone Dusted Skipper was unexpectedly late. Of special note was the Tiger Swallowtail found moribund on Route 23 by Deedee Burnside and Sharon Wander. Sharon thought it exhibited characteristics of Canadian Tiger Swallowtail— an identification later confirmed by David Wright.

June 16 --- Chris Williams led this trip to the Somerset Environmental Education Center and the adjacent Great Swamp National Wildlife Refuge. The 8 attendees noted 25 species including the first of the season Swarthy and Crossline Skippers, Northern Broken Dash, and Little Glassywing. A Painted Lady added some spice to the day.

June 24 --- Twenty-three folks gathered for the Canal Road, Appalachian Trail Lands outing in Vernon, once again led by Wade and Sharon Wander. A superb 40 species were tallied by the group, the most ever on a NABA-North Jersey trip.

The Pearty-Eye 2001 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). Next year's (2002) butterfly sightings should be addressed to 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 (note that the November meeting is the second Tuesday and the July meeting is replaced by an outdoor picnic). 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 2002 are:

President, Chris Williams (williams.christopher@worldnet.att.net),
Vice-President, Ahmet Baytas (baytasa@mail.montclair.edu),
Treasurer, Jane Scott (jane.scott@med.nyu.edu),
Secretary, Patti Pfeifer (FredP82943@aol.com)

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.

Highlights included a Southern Hairstreak found by Ahmet Baytas (very rare in Sussex County), a remarkable 25 Hickory Hairstreaks, 6 Meadow Fritillaries, 6 Baltimore Checkerspot, 100+ Eyed Browns (this is one of the few reliable places in New Jersey), 1200+ Least Skippers, and 1000+ European Skippers.

July 2 --- Twelve members of the North Jersey Butterfly Club participated in a special Regal Fritillary excursion to Fort Indiantown Gap, PA. The trip was set up through the NABA Southeastern Pennsylvania chapter working with the Nature Conservancy and the US Army National Guard. Jim Springer led us to a few nice habitats (one was rather smelly!) in the morning and early afternoon. At 3:00 we signed in at the military base, where Nature Conservancy biologists and military personnel escorted us on a two-hour walk through the Regal Fritillary study area. We all got stunning looks at an estimated 25 Regals as well as a fabulous 150+ Aphrodite Fritillaries. Most were nectaring on Common Milkweed and Butterfly Weed, but some were mud-puddling. The photographers had to be content with staying along the road, but some good shots were had nonetheless. The group totalled 27 species for the day. Thanks go to Naomi Murphy of the NABA Southeastern Pennsylvania chapter and our own Chris Williams for putting in lots of time and paperwork organ-

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Finding A Queen in New Jersey

By David Moskowitz

I knew it was a Queen right away, even though I had never seen one except in a field guide. It was so distinctive and obviously not a Monarch. I took a few pictures and casually watched it for about 10 minutes as it nectared on Swamp Milkweed and Canada Thistle and patrolled the edge of a Multiflora Rose thicket. After it flew off toward the southwest, I walked back to my car to look at the Queen in Jeffrey Glassberg's Butterflies through Binoculars field guide. There it was on Plate 40, Number 3, the page with "Strays and Historically Occurring Species." I had no idea what the distribution of the Queen was until I flipped to the species account on p. 69 and saw an "x" ("not normally found in this subregion") for every city area from Boston to Washington. I think this is when the first pang of doubt struck. Was it really a Queen after all? The field guide's entry for "Range" concluded "Very unlikely, but possible in our region." I couldn't wait to get home to check Butterflies of New Jersey by Michael Gochfeld and Joanna Burger to read more about the species, but there wasn't even an entry in the book for the Queen. This is definitely when the second great wave of doubt struck; could it really have been a Queen? I needed to see my photos and there was only one choice: One Hour Motophoto! As it turned out, it really was a Queen, the first report for New Jersey (D. Moskowitz, News of the Lepidopterists Society 43(3): 72, 74), and only the third reliable record north of North Carolina. I was pretty much addicted to butterflies before finding the Queen—can you imagine now?

[Dave chanced on this first for NJ on 17 July in East Windsor, Mercer County. See his photos of the Queen and photos of other 2001 highlight butterflies at <www.naba.org/chapters/nabanj/boyear.html>.]

Overview of the North Jersey 2001 Butterfly Season

by Jim Springer

Interest in butterflies in New Jersey has never been at a higher level. With this increasing shared interest, people have been inspired to check out places that have not been traditionally butterflyed. Therefore, we are developing a much better idea of butterfly populations within the region (especially their variations from year to year and place to place).

The area covered by this report is the 13 northern counties of NJ, i.e., from Mercer and Monmouth counties north. Coverage was pretty good in northwestern NJ, but spotty for the most part in the southern portion of the region, especially the southwestern section. No attempt was made this year to determine if reports are record early or late dates—this will be done in future years. We gratefully acknowledge that the structure of this report takes much of its inspiration from the Mulberry Wing, published by the NYC Butterfly Club since the 1980's and then jointly with the North Jersey Butterfly Club in 1995-1996. Tom Halliwell should be given credit for being the driving force behind this new report, which we hope will continue for many years.

Following an average year for winter moisture, rain during April was significantly below normal while June had significantly above average precipitation. Then, following average rainfall from July through September, it was virtually non-existent in October and November. Temperatures for the most part were normal except for one particularly hot stretch in August. First frosts came at about the normal time, but much warmer-than-average temperatures continued through mid-December, contributing to some very late sightings.

One of the major highlights this year was the finding of a road-killed Canadian Tiger Swallowtail (a first state record) at High Point State Park on a NABA-NJ field trip. Since a population is found in the PA and NY counties to the north and west of NJ, High Point is the logical place for it to have been first discovered in our state. See the article by David Wright on page 1. Also, images of the Canadian Tiger Swallowtail as well as some of the other highlights may found on the web at <www.naba.org/chapters/nabanj/boyear.html>.

Most of the pierids, even the common Cabbage White, Clouded Sulphur, and Orange Sulphur, had a surprisingly poor year, especially early in the season.

Despite searching, Bronze Copper was again not seen in northern NJ this year. Hopefully, it will be rediscovered and is not lost forever. Red-banded Hairstreak, which can be common in the southern part of the region, was not widely reported. Did this represent a low year or lack of reporters in central NJ this year?

This was a very good year for Aphrodite Fritillary, with reports from 7 locations in 3 northern counties. This is probably one butterfly that is being reported more often because of the increasing number of people in the field and their increasing identification expertise.

One of the most exciting highlights of the year was the surprise movement of Milbert's Tortoiseshell into Sussex

County. While normally only one or two, at most, are seen in the area, an incredible 18 were seen on 7/14 at Walkill NWR. This was also a great year for *Vanessa* species. American Lady numbers were outstanding, especially at Sandy Hook, where impressive late May migratory flights were noted. Painted Lady was widely reported after being virtually absent for several years. Red Admiral became the biggest invasion story of the year with big, observable flights and massive numbers. Northbound flights at Sandy Hook were excellent, with >100 per hour on numerous late May dates. Even much later, over a two-week period in July, this observer saw Red Admirals streaming from the south at treetop level in central NJ at the rate of 1 every 2 minutes. In the northwest, more than 1600 were found at Walkill NWR on 7/14, these, at least for this day, not engaged in active migration.

Common Ringlet appeared to gather strength this year for a continued push further south into the state, with reports from the lower levels of the Piedmont and even one from the Coastal Plain in Middletown, Monmouth County.

A Queen was found and documented this year in Mercer County. While the question of human assistance can be raised for this extralimital butterfly, out-of-range sightings were also made in eastern NY and Washington, D.C. Dave Moskowitz describes his experience with the Queen on page 2. Monarchs were poorly represented early in the season but, with the addition of southbound migrants, their numbers picked up somewhat during the late summer.

Duskywings don't usually elicit much comment but the report of a Sleepy Duskywing at Milford, Hunterdon Co., represents perhaps the only report from northern NJ in recent years.

The discovery of Arogos Skipper at additional sites in Morris County is very gratifying for this state-listed species. Wade and Sharon Wander give more details on page 1. Sachus used to be a late-summer immigrant in the area, but recently this skipper has been seen regularly at the southern end of the region by the middle of July. Are these still immigrants or have they become residents now? Inquiring minds want to know! Curiously, while Sachus numbers built up into the hundreds in Somerset County, only one was reported north of the Piedmont.

Overall, this was not a great year for the late-summer immigrants into the region—many of the usual suspects were either absent or in very low numbers. Scarce or unreported were Cloudless Sulphur, Little Yellow, American Snout, Variegated Fritillary, Common Buckeye, and Long-tailed, Fiery, and Ocola skipper.

Everyone is encouraged to develop a butterfly project for next year and share their observations. It might be to search out new spots that haven't been butterflyed before. Or to pick a butterfly species or two and see how much you can learn about its range, habitats, and life history in the state. Or to find a good butterfly spot near where you live and try to check it out on a regular basis throughout the year. Observing butterfly behavior more carefully and searching for

eggs, caterpillars, and chrysalises can be a very rewarding experience as well.

Finally, observers may also wish to pay more attention to the condition of butterflies. If more reports are sent in describing whether a butterfly is fresh or worn, we can get a better handle on the timing of broods. For example, a few species, such as Crossline and Least skippers, have an additional full or partial brood in the southern part of the region compared to the north—but are there others?

The efforts of everyone who contributed to this report either by sending in sightings or by writing articles are gratefully acknowledged. To keep the momentum going, please remember to send your 2002 sightings to Tom Halliwell (tbhalliwell@worldnet.att.net).

Annotated List of Northern New Jersey Butterflies for 2001

compiled by Tom Halliwell

Pipevine Swallowtail Noted from eight locations in Bergen, Morris, and Sussex counties. Only one spring report: 5/24 (1) Flatbrookville, SUS [AM]. Summer brood initially seen 6/25 (1) Englewood Cliffs, BER [MD]. Highest numbers found at the species' stronghold on the Palisades: (12) 7/30 Englewood Cliffs [MD]; (5) 7/14 Greenbrook Sanctuary, BER [LG]. Away from the Palisades, Kittatinny Valley SP, SUS, as usual, hosted several in July, e.g., (4) 7/19 [JB]. Last noted 9/18 (1) Englewood Cliffs [MD].

Zebra Swallowtail No reports received this year following two in summer 2000.

Black Swallowtail First reported 4/28 (1) Sandy Hook, MON [NABA]. Widely observed over the region, though typically in 1's and 2's. Seen most regularly in July. High counts: (42) 7/14 Wallkill River NWR, SUS [WR4JC]; (16) 7/14 Franklin Twp., SOM [R4JC]; (9) 7/14 New Brunswick, MID [R4JC]. Final sighting quite late: 10/16 (1) Thompson Park, MON [KK].

Giant Swallowtail No such luck this year. Most recently seen in summer 2000.

Eastern Tiger Swallowtail First sighting 4/23 (1) Montclair, ESS [JBr, EG]. High spring count: (12+) 5/19 Lake Denmark, MOR [WW, SW, et al.]. More numerous in summer: (38) 8/18 Willowood/Bamboo Brook, MOR/SOM [TH]; (31) 7/14 Wallkill River NWR, SUS [WR4JC]; (25) 7/3 Yard's Creek, WAR [NABA]. Last seen 10/4 (1) Somerset, SOM [PW].

Canadian Tiger Swallowtail A first state record! This road-killed specimen was procured on the 6/9 NABA field trip to High Point SP, SUS [DBu, SW, et al.] and verified by Dr. David Wright. See note on p. 1.

Spicebush Swallowtail Initially found 5/4 (1) Fredon, SUS [WW, SW].

Peak spring numbers: (10+) 5/19 Lake Denmark, MOR [WW, SW, et al.]. Summer maxima: (15) 7/28 Chester Twp., MOR [JB, MB]; (7) 8/18 Wallkill River NWR, SUS [KW]. Last observed 9/24 (1) Fredon [WW, SW].

Checkered White One report: 9/9 (1) Sandy Hook, MON [PB, SB, et al.]. Has anyone visited the Newark Airport colony recently?

Cabbage White First seen 4/4 (1) Florham Park, MOR [JG]. Uncharacteristically scarce through early June; high spring count only (25) 5/12 Hopewell, HUN [JS]. Numbers recovered by mid-late June, although many localities remained below par into summer. Summer high counts: (500) 6/21 Hillsborough, SOM [WW, SW]; (324) 7/14 Wallkill River NWR, SUS [WR4JC]; (199) 7/1 Troy Meadows, MOR [GS4JC]; (165) 7/7 Whittingham WMA, SUS [S4JC]. Final report 11/14 (1) Kittatinny Valley SP, SUS [TH].

Falcate Orangetip Reported widely and in rather good numbers. Earliest: 4/22 (1) Allaire SP, MON [LM]. High counts: (30) 5/2 Allaire [PB]; (25) 4/28 Mountainside Park, MOR [AB, FP]. Last reported 5/20 (2) Ringwood, PAS [AB].

Clouded Sulphur First reported 4/24 (1) Wharton, MOR [WW]. Very uncommon through late June; most spring counts of 1's and 2's, and none higher than 4. Numbers recovered somewhat in summer, becoming more evident in September. The (42) 7/14 Wallkill River NWR, SUS [WR4JC] was by far the maximum count. Few other locations recorded double-digit counts: (15) 9/3 White Lake, WAR [WW, SW]; (12) 9/21 Kittatinny Valley SP, SUS [TH]; (10) 7/3 Chester Twp., MOR [WW, SW]. Last seen 12/4 by several parties; several later reports may have been correct, or Orange Sulphurs with reduced orange.

Orange Sulphur First noted 4/18 (1) Owl Haven Sanctuary, MON [KK]. Uncommon through mid-June; high spring count only (10) 5/12 Hopewell, MER [JS]. Summer maxima reflect a good recovery: (300+) 9/2 Yard's Creek, WAR [JS, AB]; (299) 7/1 Troy Meadows, MOR [GS4JC]; (112) 7/14 Wallkill River NWR, SUS [WR4JC]. Last seen 12/19 (5) Hartshorne Woods, MON [KK].

Cloudless Sulphur An off year; no reports, even along the Monmouth County coast. However, one noted just across the state line in southeastern Orange County, NY [JY]. Last found in northern NJ in summer 2000.

Little Yellow Very scarce; reported from only two Monmouth County locations: Sandy Hook, 9/27 (1) [KK, GN] and 9/28 (2) [KK, TH]; Owl Haven Sanctuary, 10/3 (1) [KK].

Harvester Two sites reported. Initially discovered 6/18 (4) Succasunna, MOR [WW, SW] and seen there again 6/25 (2) [JZ, JB, MB]. No further sightings until 9/3 (1) Scherman-Hoffman Sanctuary, MOR/SOM [JS].

American Copper Excellent numbers reported in spring, but disappointingly scarce after early June. First sighting a very early 4/4 (1) Yard's Creek, WAR [DB]. Spring highs (125+) 6/3 Walpack, SUS [HB, TH, JZ]; (100+) 4/28 Sandy Hook, MON [NABA]. Summer maximum (12) 7/17 Kenvil, MOR [WW, SW, TH]. Final report: 10/22 (1) Sandy Hook [KK].

Bronze Copper Sadly, no reports from northern NJ, although found in Rockland County, NY within a few miles of the border [JLa]. Last seen in north Jersey in summer 1996.

Bog Copper A single report: 6/24 (20) Jamesburg, MID [DM]. This location is an outlier of the Pine Barrens.

Coral Hairstreak Seen initially 6/24 (2) Jamesburg, MID [DM]. Reports widespread, but in modest numbers. Peak counts: (7) 7/7 Andover Twp., SUS

[S4JC]; (6) 7/3 Ironia, MOR [JS, MB, JB]. Last seen on 7/15 at Sunrise Mt., SUS (4) [FT, JB, MB] and AT lands, Vernon, SUS (1) [KW].

Acadian Hairstreak Just two reports at one location for this scarce NJ butterfly: 6/29 and 7/5 (1) Sparta, SUS [DI, AM].

Edwards' Hairstreak Reported from seven locations in Sussex and Warren counties. First noted 6/20 (1) Sandyston Twp., SUS [AM]. High counts: (12) 7/12 Sunrise Mt., SUS [TH]; (4) 7/7 Springdale, SUS [S4JC]. Last seen 7/16 (2) Crater Lake Rd., SUS [JB, MB].

Banded Hairstreak Well-reported and in good numbers. First reports on 6/13 at Scherman-Hoffman Sanctuary, SOM (1) [AB] and Somerset, SOM (1) [MG]. Maxima: (77) 6/29 Skylands Botanical Gardens, PAS [TH]; (33) 7/7 Whittingham WMA, SUS [S4JC]; (28) Walkkill River NWR, SUS [WR4JC]. Last reported 7/28 (1) Sunrise Mt., SUS [TH].

Hickory Hairstreak Reported from six localities, all in Sussex County. First seen 6/24 (25) AT lands, Vernon, [NABA]. This count, and the (29) 7/7 Whittingham WMA, [S4JC] represent superb highs for NJ. Final report 7/14 (4) Walkkill River NWR, [WR4JC].

Striped Hairstreak Noted from ten locations in five counties. Initially found 6/24 (6, the high count) AT lands, Vernon, SUS [NABA]. All other sightings of 3 or fewer. Last noted 7/17 (1) Kenvil, MOR [WW, SW, TH].

Oak (Southern) Hairstreak A single report: 6/24 (1) AT lands, Vernon, SUS [NABA]. This represents one of a very few records north of the Piedmont. Great Swamp NWR and Somerset EEC were searched in vain this year.

Brown Elfin Eight locations reported, a surprising six of them in Sussex & Warren counties, where the species is uncommon. First seen 4/27 (1) Catfish Pond, WAR [WW, SW]. Peak count (6) 5/2 Allaire SP, MON [PB]; others just 1's or 2's. Last report quite late on 6/7 (1) Millbrook Gap, WAR [TH].

Frosted Elfin One report only: Assunpink WMA, MON 5/5 (1) [NABA]. Apparently this well-known colony was not often visited this year.

Henry's Elfin Two sites reported. At

the species' Sandy Hook, MON stronghold, sightings ran from 4/23 (19) [KK] to 5/7 (5) [DBu], with a maximum (23) there on 4/26 [KK]. Undoubtedly present both earlier and later. In addition, discovered at a presumably new station at Howell, MON 4/24 (1) [DM].

Eastern Pine Elfin Four locations reported, all from northwestern NJ. The earliest was 5/3 (1) Yard's Creek, WAR [TH] where also seen 5/10 (1) [JB]. Other reports: Stokes Forest, SUS 5/12 (2, the maximum count) [WW, SW]; Fredon, SUS 5/16 (1) [WW]; Walpack, SUS 5/7 (1) [TH] and 6/3 (1, the final sighting) [HB, TH, JZ].

Juniper Hairstreak Both spring and summer broods widely noted. First sighting of the early brood 4/28 (13) Sandy Hook, MON [KK], which also represents the spring peak count. Additional high count: (7) 4/29 Frankford Twp., SUS [FP, AB]. Spring brood last seen 6/4 (2) Fredon, SUS [WW, SW]. Second brood first found 7/5 (1) Somerset, SOM [PW]. Maximum: (14) 7/24 Somerset, [PW]. Final observation: 8/7 (1) Milford, HUN [RH].

White M Hairstreak Two sightings, one early and one late: 4/29 (1) Columbia, WAR [ABI]; and 9/7 (1) Montclair, ESS [AB].

Gray Hairstreak Not common, despite reports from across the region. The earliest sighting was 4/28 (1) Sandy Hook, MON [NABA]. Highest count: (4) 9/5 High Point SP, SUS [TH]; all others just 1's or 2's. Last seen 10/5 (1) Sandy Hook [AB].

Red-banded Hairstreak Eight reports from five locations in the southeastern section of our region, but not as evident as in recent years. First seen 5/14 (1) Assunpink WMA, MON [MB, JB], but not seen again until 6/20 (1) Somerset, SOM [MG]. Other locations: Monroe Twp., MID 8/18 (4, the high count) [JS, CW, PW]; Sandy Hook, MON 8/29 (1) [TH, JB, JZ]; and Long Branch, MON 9/2 (1, the last observation) [SB].

Eastern Tailed Blue Initially found 4/27 (4) Sandy Hook, MON [AB]. Not very common in spring; the maximum count (50+) 5/6 Mountainside Park, MOR [JS] a notable exception. Summer numbers somewhat better. Summer high counts: (47) 7/1 Troy Meadows, MOR

[GS4JC]; (20) 9/2 Yard's Creek, WAR [JS, AB]. Last noted 10/10 (1) Willowood Arboretum, SOMMOR [TH].

Spring Azure complex Rather low numbers reported this year. First noted 4/9 (1) Andover Twp., SUS [JZ]. Maxima: (22) 5/3 Yard's Creek, WAR [TH]; (21) 4/30 High Point SP, SUS [TH]; (20) 4/26 Andover Twp. [JZ]. Last seen 5/28 (2) Black River WMA, MOR [TH].

"Summer Azure" First seen 5/28 (1) Swartswood Lake, SUS [WW, SW]. Not very common; only one report reached double-digits. High counts: (12) 6/16 Great Swamp NWR [NABA]; (9) 6/15 Whittingham WMA, SUS [AB]. Final report 9/10 (1) Somerset, SOM [PW].

Appalachian Azure Seven reports from five locations. First seen 5/12 (5) Hopewell, MER [JS]. Maximum count an excellent (20) 6/3 Tower Hill Reserve, HUN [JS]. Other reports: Pequest WMA, WAR 5/24 (2) [WW, SW]; Black River WMA, MOR 5/28 (5+) [TH]; Tranquility Preserve, WAR 5/28 (2) [WW, SW] and 5/31 (1) [JB]. Final observation: 6/4 (4) at the Black River site [JB, MB].

Northern Metalmark Reported from three locations in Sussex County. First seen 6/20 (7) PVT, Stillwater Rd., [JG] and 6/20 (2) Kittatinny Valley SP, [TH]. The PVT site produced an exceptional count of (43) on 7/7 [S4JC]. The third location was Springdale, 7/7 (1) [S4JC]. Last seen at PVT site 7/22 (7) [FT].

American Snout An off year for Snouts, with just a single report: 8/29 (4) Sandy Hook, MON [TH, JZ, JB].

Variegated Fritillary Much scarcer this year than last; reported from just six widely separated locations. Not seen until 8/5, when found at Chester Twp., MOR (1) [CW, PW] and DeKorte Park, BER (1) [CM]. Peak count (3) 9/2 Sandy Hook, MON [CW, PW]. Last observed 10/13 (1) Kittatinny Valley SP, SUS [TH].

Great Spangled Fritillary An excellent year with good numbers and a widespread distribution (including a few reports from the Monmouth County Coastal Plain). First noted quite early: 6/3 (1) Tower Hill Reserve, HUN [JS]. High counts: (106) 7/7 Whittingham WMA, SUS [S4JC]; (93) 7/1 Washington Valley, MOR [GS4JC]; (80) 7/7 Crater Lake Rd., SUS [S4JC]. Last seen very late, 10/13 (1) Sunrise Mt., SUS [FT].

Aphrodite A superb seven locations reported in the northwestern counties. First seen 7/6 (1) Walpack, SUS [TH]. Multiple individuals noted 7/7 (2) PVT, Stillwater Rd., SUS [S4JC] and 7/18 (3) Flatbrookville, SUS [TH]. Found on the Piedmont 8/25 (1) Bamboo Brook, MOR [SW, WW, et al.]. Last reported 9/2 (1) White Lake, WAR [AB, JS].

Silver-bordered Fritillary An excellent four reports from three locations in Middlesex and Monmouth counties. One spring observation: 5/20 (6) Monroe Twp., MID [JS, CW, PW]. Three summer sightings: 7/14 (7, the high count) Helmetta, MID [R4JC]; 8/18 (1) Englishtown, MON [JS, PW, CW]; 8/18 (3) Monroe Twp. [CW, PW, JS]. The Helmetta and Englishtown sites appear to be new.

Meadow Fritillary Well reported. First brood initially seen 5/6 (10) White Lake, WAR [TH] where the spring high count of (20) was noted 5/8 [TH, ABa]. First brood seen last 5/29 (3) High Point SP, SUS [JB]. Second brood first found 5/29 (1) Pigeon Swamp SP, MID [MG, GT, et al.], a rare Coastal Plain find, and the only sighting away from Sussex, Warren, and Hunterdon counties. Maximum: (9) 7/18 White Lake [MB, DW], also the last sighting of the second brood. First report of third brood: 7/21 (1) Milford, HUN [DH, RH]. Peak count (25) 9/2 White Lake [AB, JS]. Last observed 9/23 (2) Wallkill River NWR, SUS [MB, JB].

Harris' Checkerspot No reports in 2001. Seen most recently in spring 2000.

Pearl Crescent First seen 5/1 (3) Assunpink WMA, MON [TF, KWa]. Low numbers reported through late June; no spring counts reached double figures. Numbers rebounded in July. Summer high counts: (285) 7/14 Wallkill River NWR, SUS [WR4JC]; (57) 7/1 Troy Meadows, MOR [GS4JC]; (53) 8/26 AT lands, Vernon, SUS [JB, TH]; (50) 9/7 Kittatinny Valley SP, SUS [MB, JB]. Last found 10/21 (1) at both Vernon [WW, SW] and Willowood Arboretum MOR/SOM [MB].

Northern Crescent No reports. Last found in summer 1996. Very difficult to identify.

Baltimore Checkerspot Reported from Sussex, Warren, Morris, and Somerset counties. First sighting quite early: 6/10 (4) Old Farm Sanctuary, WAR [JS, CW, PW]. High counts: (12)

7/7 Walpack, SUS [S4JC]; (6) 6/24 AT lands, Vernon, SUS [NABA]. Only one colony noted south of the Highlands: Willowood Arboretum, MOR/SOM (1-3) 6/23-7/10 [TH, JS, et al.]. Last seen 7/20 (1) Old Farm Sanctuary [TH].

Question Mark Three very early mid-March sightings led by 3/11 (1) Sandy Hook, MON [NK]. No further sightings until 4/27 (1) Great Swamp NWR, MOR [DMc]. Few additional reports of orange spring form; maximum just 2. Ragged spring-form individual persisted until 6/24 (1) AT lands, Vernon, SUS [NABA], overlapping summer form by nearly a month. First report of dark summer form 5/29 (1) Mountain-side Park, MOR [JS]. Summer brood maximum: (13) 7/14 Wallkill River NWR, SUS [WR4JC]; (11) 6/16 Somerset EEC, SOM [NABA]; (10) 6/10 Old Farm Sanctuary, WAR [JS, CW, PW]. First fall, orange form 9/16 (1) Sandy Hook [NK]. Rather few observations in fall; no counts larger than 2. Last seen 10/19 (1) Readington Twp., HUN [SW, WW].

Eastern Comma First report an early 3/9 (1) Morristown Airport, MOR [WW]. Orange spring form not common, mostly 1's and 2's, and no count higher than 5. Latest spring form noted 6/24 (1) AT lands, Vernon, SUS [NABA]. Dark summer form more widespread and common; first noted 6/12 (1) Troy Meadows, MOR [JG]. Summer brood peak counts: (34) 7/14 Wallkill River NWR, SUS [WR4JC]; (14) 6/24 AT lands, Vernon [NABA]; (12) 6/18 Flatbrookville, SUS [TH]. Fresh fall individual noted as early as 9/2 (1) AT lands, Vernon [KW, PG, et al.]. Thereafter, few reports through fall. Last observed 10/23 (1) Bull's Island, HUN [TH, ABa].

Compton Tortoiseshell Earliest sighting of overwintering individual 3/20 (1) Ringwood, PAS [SS]. Six spring observations of singles, the last 4/20 (1) High Point SP, SUS [TH]. Summer-emerging brood well reported; first noted 6/22 (1, the sole report south of the Highlands) Troy Meadows, MOR [JG]. High counts: (9) 7/7 Walpack, SUS [S4JC]; (4) 6/28 Skylands Botanical Gardens, PAS [TH]. No reports from mid-July to early September, a period of apparent aestivation. Six sightings of fall individuals, the last 11/18 (1) Stockholm, SUS [KW].

Mourning Cloak First seen 3/11 (1) Eatontown Arboretum, MON [NK]. High counts of emerged hibernators: (15) 4/4 Yard's Creek, WAR [DB]; (13) 4/22 Watchung Mt. Park, SOM [JS]; (12) 4/14 Garret Mt., PAS [AB, FP, PP]. Fresh individuals noted as early as 5/31 (1) Lake Denmark, MOR [TH]. Widely reported in summer, but fewer numbers. Peak count: (5) 7/14 Wallkill River NWR, SUS [WR4JC]. Presumably aestivated late July to mid-September; no observations submitted. Fall numbers mostly 1's and 2's with final sighting 11/16 (1) Kittatinny Valley SP, SUS [TH].

Milbert's Tortoiseshell A virtual invasion in Sussex County provided one of the exciting highlights of the season. First found 6/10 (1) Crater Lake Rd. [SB]. Subsequently discovered 6/28 (1) at Wallkill River NWR [LP] where an amazing (18) showed off on 7/14 [WR4JC]. The Wallkill visitors persisted through 7/15 (8+) [JS, CW, PW] and 7/16 (6) [AV, KH], then apparently departed. A final individual turned up much later: 9/5 (1) Springdale [MB].

American Lady Widespread and in excellent numbers. Initially found 4/10 (1) Englewood Cliffs, BER [MD]. Spring counts superb at Sandy Hook, MON where northbound migrants were regular through early June, peaking at 120 per hour on 5/30 [BD]. High summer counts: (26) 7/14 Wallkill River NWR, SUS [WR4JC]; (20) 7/7 Crater Lake Rd., SUS [S4JC]. Numbers diminished noticeably after late July. Last seen 11/2 (1) Hartshorne Woods, MON [KK].

Painted Lady Gratifyingly widespread after a few years of virtual absence. First reported 5/28 (1) Black River WMA, MOR [TH]. Spring peak just (3) 6/1 Yard's Creek, WAR [AB]. Numbers increased in summer to late August highs, diminished rapidly in September, but persisted well into December. Maxima: (21) 8/26 AT lands, Vernon, SUS [TH, JB]; (12) 8/27 Fredon, SUS [SW, WW]; (10) 8/31 Somerset, SOM [PW]. Final sighting 12/22 (1) Sandy Hook, MON [SB].

Red Admiral A banner year! First seen 4/14 (1) Garret Mt., PAS [FP]. Northbound migrants at Sandy Hook, MON observed through mid-June, with massive flights of 250-500 per hour noted on 5/25-5/26 [BD]. Several other late May dates were just slightly less

overwhelming. Inland spring high counts: (75) 6/8 Poxono area, WAR [TH, ABa]; (60+) 6/14 AT lands, Vernon, SUS [TH]. Double-digit counts routine in many places from late May through July. Summer high counts overshadowed by the incredible (1647) 7/14 Wallkill River NWR, SUS [WR4JC]. Other notable counts: (76) 7/15 AT lands, Vernon [KW]; (60+) 9/18 Yard's Creek, WAR [TH, HB]; (44) 7/7 Newton Meadows, SUS [S4JC]. Last observed 11/16 (1) Sandy Hook, MON [KK, AB].

Common Buckeye A very poor year; just four widely-spaced reports from three locations: 5/31 (1) Sandy Hook, MON [PB]; 7/1 (1) Troy Meadows, MOR [GS4JC]; 8/30 (1) Somerset, SOM [PW]; 9/28 (1) Sandy Hook [TH].

"White Admiral" Sussex, Warren, and Hunterdon counties yielded an excellent seven reports for the season. The first was 6/8 (1) Knowlton Twp., WAR [DB] while the last was not until 8/26 (1) Hardwick Twp., WAR [KW]. The only report south of the Highlands was also the sole report of multiples: (2) 7/13 Milford, HUN [RH].

"Red-spotted Purple" Widely observed around the region, but most abundant in the northwestern counties. Initially found 5/20 (1) Garret Mt., PAS [FP, PP, HB]. Peak counts: (36) 6/19 Steam Mill, SUS [TH]; (11) 7/27 Walpack, SUS [JB, MB]; (10+) 7/7 Crater Lake Rd., SUS [S4JC]. First brood at least to 7/28 (4) High Point SP, SUS [TH]. Fresh second brood individual by 7/26 (1) Fredon, SUS [WW, SW]. Much less common than first brood; the few observations all of singles. Last noted 9/9 (1) Merrill Creek, WAR [WW, SW].

Viceroy Widely, though thinly reported. First observed quite early: 5/15 (1) Mountainside Park, MOR [JG]. Spring brood peak: (6) 5/29 Pigeon Swamp SP, MID [MG, et al.]. High counts of summer brood: (5) 7/14 Pigeon Swamp SP [R4JC]; (4) 7/29 Kittatinny Valley SP, SUS [TH]. Reports from 9/23 (1) Lafayette, SUS [SW, WW] and 10/11 (1, the final sighting) Hardyston Twp., SUS [TH] probably represent a third brood.

Hackberry Emperor Northwestern NJ produced most observations of both broods; Sandy Hook's large population

was a significant exception. First brood initially found 6/12 (1) White Lake, WAR [TH]. Peak counts: (24) 6/18 Flatbrookville, SUS [TH]; (13) 6/14 AT lands, Vernon, SUS [TH]. Last seen 7/7 (1) Whittingham WMA, SUS [S4JC]. Second brood not as well reported; first noted 8/16 (1) Kittatinny Valley SP, SUS [TH]. High counts: (20) 8/29 [TH, JB, JZ] and 9/1 [PB] Sandy Hook, MON. Final sighting: 9/16 (1) Sandy Hook [TH].

Tawny Emperor With the exception of the big Sandy Hook population, all sightings were from the northwestern counties. First report, an early 6/16 (1) Flanders, MOR [SW]. First brood high count (6) 6/30 Whittingham WMA, SUS [JG]; others only 1's and 2's. Last reported 8/1 (1) Wallkill River NWR, SUS [AB]. Second brood seen only at Sandy Hook, MON and not until 8/29 (27, the peak count) [JZ, JB, TH], though no doubt present considerably earlier. Last seen there 9/27 (1) [KK].

Northern Pearly-Eye With the exception of two individuals found at Green Brook, SOM 7/16 [WW, SW], Morris, Sussex, and Warren counties produced all sightings. Initially seen 6/24 (3) AT lands, Vernon, SUS [NABA]. High counts: (5) 7/4 Yard's Creek, WAR [NABA]; (5) 7/7 Whittingham WMA, SUS [S4JC]. Ragged individual last noted 7/29 (1) Tranquility Preserve, WAR [SW, WW]. Three fresh Pearly-Eyes found 8/17 Newton Meadows, SUS [TH] represent the only report of the less common second brood.

Eyed Brown Four Sussex County locations noted. First seen 6/14 (3) AT lands, Vernon [TH]. The same site provided an excellent maximum count of (100+) on 6/24 [NABA] as well as a 7/15 report [KW]. Other locations: Hardyston Twp. 7/5 (3) [TH] and 7/11 (2) [TH, ABa]; Wallkill River NWR, 7/14 (1) [WR4JC]; and Montague Twp. 7/15 & 7/18 (the final sighting) [JT].

Appalachian Brown Rather widely and well reported. First noted 6/13 (1) Great Swamp NWR, MOR [AB]. Maxima: (12) 7/7 Newton Meadows, SUS [S4JC]; (10) 6/21 Frankford Twp., SUS [TH]; (10) 7/13 Lake Denmark, MOR [TH]. Last seen 9/6 (1) South Amboy, MID [SB].

Little Wood-Satyr Initial report very early: 5/11 (4) Mountainside Park, MOR [DBu]. Peak counts of spring brood:

(100+) 6/3 Walpack, SUS [HB, TH, JZ]; (75) 5/29 Mountainside Park [JS]. Spring brood noted at least to 6/27 (2) Springdale, SUS [TH]. Summer brood found 6/26 (8) Troy Meadows, MOR [JG]. High counts: (184) 7/1 Troy Meadows [GS4JC]; (127) 7/1 Great Swamp NWR, MOR [GS4JC]. Last seen on the very late date of 8/19 (1) Whittingham WMA, SUS [WW, SW], nearly a month after the previous sighting.

Common Ringlet Well reported. Spring brood first noted 5/24 (5) Walpack, SUS [TH]. High counts: (15) 6/7 Yard's Creek, WAR [JB, MB]; (10) 6/9 High Point SP, SUS [NABA]. Spring brood last seen 6/24 (2) AT lands, Vernon, SUS [NABA]. First summer brood report 7/21 (3) PVT, Stillwater Rd., SUS [FT]. Summer maximum (14) 8/1 Wallkill River NWR, SUS [AB]. Last sighting 8/28 (1) High Point SP [WW, SW]. The species continues to push south. The Piedmont lowlands yielded three first brood individuals: 6/12 (1) DeKorte Park, BER [AB]; 6/12 (1) Troy Meadows, MOR [JG]; and 6/13 (1) Great Swamp NWR, MOR [AB]. Most exciting was the first Coastal Plain report: 7/31 (1) Middletown, MON [NK].

Common Wood-Nymph Reported widely over the region and in excellent numbers. First seen 6/22 (1) Troy Meadows, MOR [JG]. High counts: (300+) 7/10 Bamboo Brook/Willowwood Arboretum, MOR/SOM [TH]; (213) 7/1 Great Swamp NWR, MOR [GS4JC]; (181) 7/14 Wallkill River NWR, SUS [WR4JC]; (158) 7/1 Washington Valley, MOR [GS4JC]. Last noted 9/11 (3) Willowwood Arboretum [TH].

Monarch Quite uncommon this year until fall migration. Not noted until 5/28 (1) DeKorte Park, BER [AK]. No count greater than 3 until July. Peak non-migratory counts: (42) 7/14 Wallkill River NWR, SUS [WR4JC]; (35+) 9/8 Newton Meadows, SUS [SW, WW, et al.]. The bulk of migration took place mid-September—early October, with local high counts as follows: (283) 9/26 Montclair, ESS [MB, EG]; (220) 9/15 Chimney Rock, SOM [CA]; (200+) 9/15 Stockholm, SUS [KW]. Last sighting 11/5 (1) Rahway, UNI [JS].

Queen An incredible surprise! Discovered and photographed 7/17 (1) East Windsor, MER [DM]. The species has been known to stray north, and, in

fact, individuals were documented from Montgomery, NY, and Washington, DC, in the weeks following. But there are, of course, always questions of possible captive origin for big, beautiful butterflies out of range. See p. 2 note.

Silver-spotted Skipper Initially seen 5/6 (1) Somerset, SOM [MG]. No double-digit counts, however, until 6/18 (10) Flatbrookville, SUS [TH]. High counts: (107) 7/7 Whittingham WMA, SUS [S4JC]; (62) 8/18 Willowood/Bamboo Brook, MOR/SOM [TH]; (57) 8/25 Chester Twp., MOR [WW, SW, et al.]. Last seen 10/3 (1) Somerset [PW].

Long-tailed Skipper No reports this year! Last reported in summer 2000.

Hoary Edge Twelve reports from eight locations in Sussex, Morris, Passaic, and Essex counties. First seen 5/29 (1) Mountainside Park, MOR [JS]. High counts: (11) 6/30 Kittatinny Valley SP, SUS [TH]; (7) 7/21 Skylands Botanical Gardens, PAS [NABA], which was also the final sighting.

Southern Cloudywing Surprisingly, only one sighting: 7/4 (1) Yard's Creek, WAR [NABA].

Northern Cloudywing Fairly well reported, but only from Sussex, Morris, and Hunterdon counties. Initial sighting quite early: 5/7 (1) Mountainside Park, MOR [AB]. Maximum an excellent (35) 5/29 [JS] at this same location. No other counts reached double-digits. Last seen 7/7 (1) Walpack, SUS [S4JC].

Dreamy Duskywing Rather widely noted and in good numbers. First found 5/5 (25) Assunpink WMA, MON [NABA]. High counts: (a spectacular 200+) 5/13 Pigeon Swamp SP, MID [PW]; (30+) 5/14 Assunpink [JB, MB]. Last noted 6/16 (2) Mt. Olive Twp., MOR [TH, SW].

Sleepy Duskywing A single report, somewhat north of its more well-known haunts: 4/21 (1) Milford, HUN [WW, SW, et al.].

Juvenal's Duskywing First reported 4/22 (1) Watchung Mt. Park, SOM [JS]. High counts: (36) 5/10 Yard's Creek, WAR [JB]; (30) 5/13 White Lake, WAR [WW, SW]; (25+) 5/5 Kittatinny Valley SP, SUS [WW, SW]. Last seen 6/20 (1) Whittingham WMA, SUS [TH].

Horace's Duskywing Noted from nine locations, but only two north of the

Piedmont. The seldom-reported spring brood provided the first sighting 6/9 (2) Mountainside Park, MOR [JS]. Not found again until the fresh second brood 7/1 (1) Great Swamp NWR, MOR [GS4JC]. Peak counts occurred with the third brood 8/18: (5) Helmetta, MID [JS, CW, PW]; (4) Monroe Twp., MID [JS, CW, PW]. Last observed 9/6 (1) Somerset, SOM [PW].

Wild Indigo Duskywing Widely reported in good numbers across the region. First noted very early: 4/21 (2) Milford, HUN [WW, SW, et al.]. First brood peak counts: (15) 5/15 Mountainside Park, MOR [AB, JG]; (9) 6/4 Yard's Creek, WAR [TH]. Last of spring brood observed 6/16 (1) Mt. Olive Twp., MOR [TH, SW, et al.]. Second brood first seen 6/29 (4) Somerset, SOM [PW]. High summer brood counts: (249+) 7/14 New Brunswick, MID [R4JC]; (60) 7/29 Yard's Creek, WAR [MB, JB]. Third brood at least by 8/28 (10) Merrill Creek, WAR [TH]. Final sighting: 10/17 (1) Somerset [PW].

Common Checkered-Skipper Not very common, but reports scattered across the region (more so in September). Not noted until 7/3 (1) Hillsborough, SOM [WW, SW]. Maximal counts: (6) 7/16 Hillsborough [WW, SW]; (6) 9/23 Pennington, MER [CW, PW]; (5) 7/14 Walkkill River NWR, SUS [WR4JC]. Last observed very late: 11/13 (1) Cranberry Twp., MID [DM].

Common Sootywing Another species which did not live up to its name. Spring brood reported from only two locations: Assunpink WMA, MON 5/5 (1) [NABA] & 5/14 (2) [JB, MB]; and Hillsborough, SOM 5/24 (20+, an excellent count) [WW, SW]. The second brood produced more sightings. Initially detected 7/3 (4) Hillsborough [WW, SW]. Peak count: (6) 7/24 DeKorte Park, BER [TH]. Second brood last seen 8/7 (5) DeKorte Park [AB]. Third brood noted only 8/21 (6) [PB] and 9/5 (1, the final sighting) [KK] at Owl Haven Sanctuary, MON.

Arctic Skipper Seen on at least six occasions at the High Point SP, SUS colony. First noted very early: 5/20 (1) [MB, JB]. Peak count an excellent (20) 6/9 [NABA]. Seen last on 6/19 (1) [TH].

Swarthy Skipper Rather scarce. Not surprisingly, sightings essentially

confined to the Piedmont and Coastal Plain. The first brood elicited just four reports of individuals between 6/16 (1) Great Swamp NWR, MOR [NABA] and 7/1 (1) Washington Valley, MOR [GS4JC]. Second brood a bit more evident. First noted 8/4 (1) Owl Haven Sanctuary, MON [PB]. High count: (12) 8/25 Chester Twp., MOR [WW, SW, et al.]. Last seen 9/9 (4) Sandy Hook, MON [NABA].

Least Skipper Initial sighting 5/29 (1) Pigeon Swamp, MID [PW]. First brood high numbers: (a staggering 1200+) 6/24 AT lands, Vernon, SUS [NABA]; (125) 7/1 Troy Meadows, MOR [GS4JC]. Latest first brood report 7/25 (1) Willowood Arboretum, MOR/SOM [TH]. Second brood first seen 7/27 (6) Walkkill River NWR, SUS [TH, ABa]. Maximum count: (100+) 8/26 AT lands, Vernon [TH, JB]. Second brood last observed 9/23 (1) AT lands, Vernon [TH]. Final reports 10/10 (1, fresh) and 10/17 (1) Somerset, SOM [PW] were probably of a partial third brood.

European Skipper First noted 6/9 (4) High Point SP, SUS [NABA]. Peak counts: (1000+) 6/24 AT lands, Vernon, SUS; (250) 6/19 Troy Meadows, MOR [JG]; (200+) 6/16 Fredon Twp., SUS [MB]. Last seen 7/14 (2) Walkkill River NWR, SUS [WR4JC].

Fiery Skipper Very scarce this year. Only five locations reported, all from the Coastal Plain or Piedmont: Sandy Hook, MON (1) 9/16 [TH] & 10/22 [KK]; Somerset, SOM 9/16-9/17 (1) [PW]; Pennington, MER 9/23 (2) [CW, PW]; Thompson Park, MON 10/11 (1) [KK]. Final observation remarkably late: Hartshorne Woods, MON 11/26 [KK].

Leonard's Skipper Reported from eight sites in Sussex, Morris, and Somerset counties, but never more than one individual at a time. Initially found 8/16 (1) Fredon, SUS [SW, WW]. Final sighting 9/8 (1) Newton Meadows, SUS [TH, SW, et al.].

Cobweb Skipper Surprisingly, and disappointingly, reported only from Mountainside Park, MOR. First noted there 5/6 (6) [JS]. High count a superb (25) 5/15 [JG] which was also the last date observed.

Indian Skipper Reported from eight locations in Sussex, Warren, and Morris counties. First seen 5/15 (5)

Mountainside Park, MOR [JG, AB]. Maxima: (8) 5/31 Lake Denmark, MOR [TH]; (8) 6/10 Blue Mt. Lakes Rd., SUS [WW, SW]; (7) 5/29 Mountainside Park [JS]. Last observed 6/24 (1) AT lands, Vernon, SUS [NABA].

Peck's Skipper Widely observed in good numbers. Initial reports from two sites on 5/28: (1) Montclair, ESS [AK]; and (2) Swartswood SP, SUS [WW, SW]. First brood high count: (17) 6/14 AT lands, Vernon, SUS [TH]. Latest first brood report: 7/4 (1) Yard's Creek, WAR [NABA]. Second brood initially noted 7/16 (1) Somerset, SOM [MG]. Peak counts: (218) 8/25 Chester Twp., MOR [TH, WW, et al.]; (133) 8/18 Willowood/Bamboo Brook, MOR/SOM [TH]. Last sighting of second brood 9/11 (7) Willowood/Bamboo Brook [TH]. Probable third brood observations 10/3 (2) Montclair [AB], and through 10/17 (1, the final report) Somerset [PW, MG].

Tawny-edged Skipper First reported 6/3 (1) Walpack, SUS [TH]. High count of first brood (10) 6/26 Willowood Arboretum, MOR/SOM [JS, TH]; (5) 6/9 High Point SP, SUS [NABA]. First brood last seen 7/11 (1) Fredon, SUS [WW, SW]. First sighting of second brood 7/21 (1) Loantaka Brook Park, MOR [JG]. Second brood maxima: (24) 8/25 Chester Twp., MOR [SW, WW, et al.]; (9) 8/18 Willowood/Bamboo Brook, MOR/SOM [TH]. Last seen 10/3 (1) Willowood Arboretum [TH].

Crossline Skipper Noted first 6/16 (3) Great Swamp NWR, MOR [NABA]. Peak counts: (30) 7/3 Kay Environmental Center, MOR [WW, SW]; (20) 6/26 Willowood Arboretum, MOR/SOM [JS, TH]. First brood last seen 7/28 (1) High Point SP, SUS [TH]. Second brood observed twice in central NJ: (3) 8/18 Helmetta, MID [JS, CW, PW] and (7, the final sighting) 9/1 Somerset, SOM [PW].

Long Dash Found at six locations in Sussex and Warren counties. First seen 6/2 (4) Walpack, SUS [WW, SW, TH]. An excellent high count (20) 6/10 Old Farm Sanctuary, WAR [JS, CW, PW] far outdistanced the next-highest count of (6) 6/10 Blue Mt. Lakes Rd., SUS [WW, SW]. Last noted 6/24 (3) AT lands, Vernon, SUS [NABA].

Northern Broken-Dash Reported from around the region, although more numerous in the northern counties. First

found 6/16 (1) Great Swamp NWR, MOR [NABA]. High counts: (108) 7/1 Great Swamp NWR [GS4JC]; (81) 7/1 Troy Meadows, MOR [GS4JC]. Sightings mostly petered out after July. A very few scattered observations, however, continued to 8/28 (1) High Point SP, SUS [SW, WW], some, perhaps, the product of a partial second brood.

Little Glassywing Most common in the north, but reported widely in the region. Earliest sighting 6/16 (1) Somerset EEC, SOM [NABA]. Maxima: (289) 7/1 Washington Valley, MOR [GS4JC]; (183) 7/1 Troy Meadows, MOR [GS4JC]; (87) 7/7 Whittingham WMA, SUS [S4JC]. Last of normal brood 7/27 (3) Walpack, SUS [JB, MB]. The report of an unworn individual 8/18 (1) Monroe Twp., MID [JS, CW, PW] raises the possibility of a partial second brood in central NJ.

Sachem Well-reported in the southern half of our region, but just one observation north of the Piedmont. First seen 7/9 (1) Somerset, SOM [PW]. High counts: (150+) 9/13 Somerset [PW, MG]; (30) 9/9 Deep Cut Park, MON [NABA]. Last observed 10/15 (1) Somerset, SOM [PW].

Arogos Skipper An excellent year of further discovery at several sites near Succasunna, MOR (see note on p. 1). First noted 7/3 (4) Ironia [JB, MB, JS], where up to (15) noted at least through 7/9 [WW, SW, et al.]. A few new sites discovered in Kenvil on 7/5 (4), where a superb (20) were found on 7/9 [WW, SW, et al.]. The latest sighting was from Kenvil 7/17 (2) [WW, SW, TH].

Delaware Skipper First seen 6/23 (2) Willowood Arboretum, MOR [TH]. Good numbers reported in the northern counties: (60) 7/7 Walpack, SUS [S4JC]; (30+) 7/17 Kenvil, MOR [WW, SW, TH]; (30) 7/4 Yard's Creek, WAR [NABA]; (29) 7/1 Great Swamp NWR, MOR [GS4JC]. Last observed 7/28 (3) High Point SP, SUS [TH].

Mulberry Wing Rather sketchily reported. Initially noted 7/1 (3) Great Swamp NWR, MOR [GS4JC]. High counts: (21) 7/14 Helmetta, MID [R4JC]; (11) 7/28 High Point SP, SUS [TH]; (8) 7/13 Lake Denmark, MOR [TH]. The 7/28 High Point sighting was the last.

Hobomok Skipper Widely reported in good numbers. Seen initially quite

early: 5/11 (4) Mountainside Park, MOR [DBu]. High counts: (50) 6/2 Walpack, SUS [WW, SW, TH]; (40) 6/1 High Point SP, SUS [JB, TH]. Found on the Coastal Plain, where rare, 5/29 (1) Pigeon Swamp, MID [GT]. Last noted 7/7 (5) Rifle Camp Park, PAS [PBo, JL].

Zabulon Skipper Reported rather irregularly, and in low numbers, despite sightings from around the region. First seen 5/14 (1) Assunpink WMA, MON [JB, MB]. Peak first brood count (8) 5/29 Mountainside Park, MOR [JS]. Spring brood last observed 7/1 (1) Great Swamp NWR, MOR [GS4JC]. Second brood initially found 7/31 (1) Somerset, SOM [MG]. Maximum count: (17) 8/18 Willowood/Bamboo Brook, MOR/SOM [TH]. Last observed 9/24 (1) Willowood Arboretum, SOM/MOR [TH].

Broad-winged Skipper Reported from only six locations. This is certainly not an indication of true distribution, but rather evidence that butterflies tend to avoid *Phragmites*-dominated habitats. First noted 7/7 (1) Whittingham WMA, SUS [S4JC]. High counts: (250+) 8/7 De Korte Pk., BER [AB]; (51) 7/31 E. Rutherford Industrial Pk., BER [KW]. Last seen 9/9 (1) Sandy Hook, MON [NABA].

Dion Skipper A good showing, with eight locations in Sussex, Warren, Morris, and Middlesex counties. Initially observed 6/27 (2) Springdale, SUS [TH]. Peak counts: (7) 7/1 Troy Meadows, MOR [GS4JC]; (7) 7/1 Great Swamp NWR, MOR [GS4JC]. Last observation: 7/14 (2) Pigeon Swamp SP, MID [R4JC].

Black Dash Well reported from Sussex, Warren, Morris, Somerset, and Middlesex Counties. Most common in the northwest. First seen 6/24 (2) Jamesburg, MID [DM]. High counts: (61) 7/1 Great Swamp NWR, MOR [GS4JC]; (40) 7/14 Helmetta, MID [R4JC]; (30) 7/7 Andover Twp., SUS [S4JC]; (26) 7/1 Washington Valley, MOR [GS4JC]. Last seen 7/28 (5) High Point SP, SUS [TH].

Dun Skipper Initially found 6/12 (2) Montclair, ESS [AB]. First brood commonly observed, especially north of the Coastal Plain. Peak counts: (80) 7/21 Skylands Botanical Gardens, PAS [NABA]; (55) 7/27 Walpack, SUS [JB, MB]; (49) 7/1 Washington Valley, MOR [GS4JC]. Final first brood sighting 8/19 (3) Fredon, SUS [SW, WW]. Second brood much less numerous. First seen

8/12 (1) Willowood Arboretum, SOM/MOR [BW]. High count: (11) 8/25 Chester Twp., MOR [TH, WW, et al.]. Last seen 9/21 (1) Somerset, SOM [PM].

Dusted Skipper Reports received from eight sites, primarily in Sussex and Morris counties. First seen 5/15 (6) Mountainside Park, MOR [AB, JG]. Peak count (8) at same location 5/29 [JS]. The only report south of the Highlands was on the Coastal Plain 5/29 (1) Pigeon Swamp SP, MON [GT, CW, et al.]. Final sightings from two locations on 6/9: (3) Mountainside Park [JS, JG] and (1) High Point SP, SUS [NABA].

Pepper and Salt Skipper Two Sussex County locations reported. Initially seen very early: 5/19 (1) Byram Twp., [SW, WW], a new site for this rare species. The High Point SP, colony was productive from at least 6/1 (4) [MB, JB, TH] to 6/19 (1) [TH], with an excellent high count of (25) 6/9 [NABA].

Common Roadside-Skipper The small colony at Yard's Creek, WAR was gratifyingly cooperative 6/1 (2) [ABJ]; 6/4 (1) [TH]; and 6/7 (3) [JB, MB].

Ocola Skipper One report: 8/18 (1) Fredon, SUS [SW, WW]. Remarkably, this southern visitor has shown up at this northwestern NJ site in five out of the last seven years.

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

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Other citations:

NABA-North Jersey Butterfly Club field trip (NABA), Great Swamp Fourth of July Count (GS4JC), Raritan Fourth of July Count (R4JC), Springdale Fourth of July Count (S4JC), Walkkill 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, EEC = Environmental Education Center, NWR = National Wildlife Refuge, PVT = Paulinskill Valley Trail, SP = State Park, WMA = Wildlife Management Area

Arogos (continued from p. 1)

field even though we were losing sun and the breeze was picking up. We were elated to find a few Arogos Skippers there, and then on a later visit, under better conditions, this field turned out to have more Arogos than our other sites put together! Very exciting!

As far as we know, in north Jersey the caterpillars of Arogos Skipper use bluestem grasses—and only bluestem grasses—as their food plant. Although these grasses are fairly common and widespread in New Jersey, we so far have been unable to find this little skipper outside of this one localized area in Morris County. The situation in south Jersey is very different. According to Dr. Dale Schweitzer, the Arogos Skipper and moth guru, Pine Barrens Reedgrass, and not bluestem grasses, is the sole larval food plant there. And whereas Arogos Skippers north of the Coastal Plain fly from late June to mid- to late July, Arogos in the south only begin flying in late July! What's going on here, you ask? Are these 2 different species? Is one or the other—or both—a

subspecies of the Arogos Skipper from out west? Dr. Dale collected a few worn individuals from the north Jersey population for DNA analysis. Stay tuned for future developments.

Our thanks to fellow NABA-North Jersey members who helped fill out the 2001 Arogos picture by passing on their field observations. And we would be remiss, if not downright ungrateful, if we did not thank the New Jersey Endangered and Nongame Species Program and the U.S. Fish & Wildlife Service for their continued support. Paying us to look for butterflies—it doesn't get any better than that!

[To see photos of the Arogos Skipper and other highlights of this year, visit NABA's website at <www.naba.org/chapters/nabanj/boyear.html>.]

Field Trips (continued from p. 2)

izing this trip. It is possible that the trip will be offered again next year, with preference given to those NABA-North Jersey members who did not get to go on this year's trip. Please let Chris Williams know if you are interested in this trip for next year.

July 4 --- The North Jersey Butterfly Club picnic at Yard's Creek was a great success. The weather looked awful at the start, but cleared appreciably, and all 21 attendees had a fine time socially, gastronomically (even if Fred's corn took forever), and lepidopterally. At Yard's Creek we had 30 butterfly species, the highlights being a very cooperative Southern Cloudywing, several individuals of the dark inland form of Common Wood-Nymph, and 3 Edwards' Hairstreaks. Of course, after the intrepid half of the group hiked up the mountain to see Edwards' Hairstreaks, they returned to learn that Jeff Glassberg had found one right near the lower elevation picnic area! Also of interest were good counts of Great Spangled Fritillary, Silver-spotted Skipper, and Delaware Skipper. In mid-afternoon some of the group went to White Lake and added Meadow Fritillary, Peck's Skipper, Northern Broken Dash, and Black Dash to the species total. Special thanks go to Chris Williams who not only organized the picnic, but also sacrificed his possible sighting of Edwards' Hairstreak in order to cook the burgers, hot dogs, and chicken.

(Continued on next page)

July 21 --- Thirty butterfly species were noted on this trip that visited the Skylands State Botanical Gardens in Ringwood plus the Blue Lake area of Sterling Forest, N.Y. There were 17 participants including leader Tom Halliwell. John Lampkin should also be commended for directing us in the Blue Lake area. Highlights for the day included an Acadian Hairstreak and 3 Broad-winged Skippers at Blue Lake as well as a very cooperative female black Tiger Swallowtail, a Juniper Hairstreak, 7 Hoary Edges, and 80 Dun Skippers at Skylands.

August 24-27 --- Five intrepid butterflyers from the North Jersey Butterfly Club, led by Jim Springer, ventured to southeastern Virginia to the Great Dismal Swamp NWR for a long weekend of butterflying. Great Dismal Swamp consists of over 100,000 acres of mostly forested woodlands, including a 3000-acre natural lake in the middle. It is the premier place to find a variety of butterflies that reach their northernmost limit in the area. The NWR is easily accessed by various dirt roads and paths on top of dikes. The trip also visited several other sites in Chesapeake and Virginia Beach, VA, including Northwest River Park and the Pongo area. The weather was very cooperative, with temperatures in the low 80s and mostly clear or high clouds for the entire weekend. Most of the target species were found, including Zebra and Palamedes swallowtails, Sleepy Orange, Great Purple Hairstreak, Southern and Creole pearly-eyes, Gemmed and Carolina satyrs, Yehl Skipper, and Lace-winged and Carolina roadside-skippers. The highlights had to be the Great Purple Hairstreaks that nectared on blooming Hercules Clubs and Sumacs, and the Palamedes Swallowtails mudpuddling and circling back gracefully when disturbed.

September 9 --- About 15 members and friends joined Chris Williams on this outing to Sandy Hook and Deep Cut Park in Monmouth County. The highlight was a rare sighting of a Checkered White that had been discovered earlier in the morning by member Pete Bacinski. Unfortunately, despite much searching, it was glimpsed by only a few of the group. The trip list of 18 species also contained other "goodies" such as Painted Lady, Tawny Emperor, Swarthy Skipper, and Sachem.

September 15-16--- The NABA-North Jersey annual Cape

May weekend produced 28 species this year, a bit lower than the totals of recent years. This is indicative of a generally poor year for southern immigrants and strays. The group included leader Chris Williams and five other members. Of course there were highlights. They included: Gray Hairstreak (many), Variegated Fritillary, Mourning Cloak, Common Buckeye, Long-tailed Skipper (a premier vagrant), Common Checkered Skipper, Fiery Skipper, and Crossline Skipper.

Tiger (continued from p. 1)

Tree or Yellow Poplar (*Liriodendron tulipifera*), which is toxic to the Canadian Tiger Swallowtail. Both species can utilize Black Cherry (*Prunus serotina*). All of these hosts are present in Sussex County where the two Tiger species presumably co-occur.

The distribution of the Canadian Tiger Swallowtail in the eastern United States is shown in Fig. 1 below. [Counties with records of Canadian Tiger Swallowtail are shaded.] Across the Great Lakes region, the boundary between the Canadian and Eastern Tiger Swallowtails is a nearly straight E-W line. A narrow zone of interspecific hybridization occurs where the two species meet. Extensive research by Mark Scriber and collaborators at Michigan State University has shown that this line delineates the average seasonal thermal unit accumulations necessary for a single brood (north) or multiple broods (south). To the east of the Great Lakes, there is apparently considerable hybridization between the two species from central New York and southern New England through the Appalachian Mts. in Pennsylvania to the higher altitudes of West Virginia. The hybrid population in this region principally looks and acts like the Canadian Tiger Swallowtail. It is single-brooded, plus displays adult and larval characters of the Canadian Tiger Swallowtail. The larvae, however, can detoxify Tulip Tree, indicating they have acquired this ability from the Eastern Tiger Swallowtail through genetic introgression.

[The discovery of the Canadian Tiger Swallowtail took place on the June 9 NABA-North Jersey Butterfly Club trip to High Point SP. Go to <www.naba.org/chapters/naban/boyear.html> to view photos of this and other northern NJ highlights.]

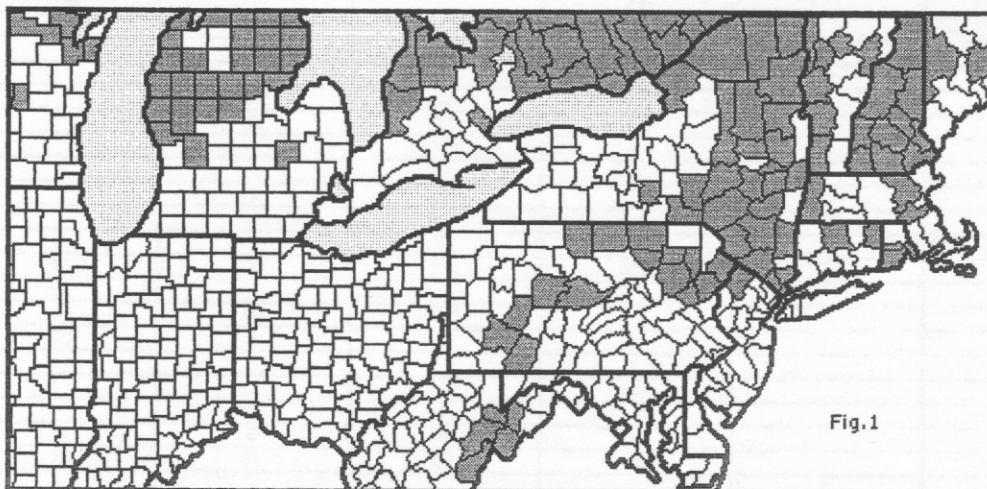


Fig. 1

4th of July Butterfly Counts - 2001

	LAKEHURST (6/30)	GREAT SWAMP (7/1)	SPRINGDALE (7/7)	SE ORANGE CO. (7/8)	RARITAN (7/14)	WALLKILL NWR (7/14)
Black Swallowtail		3	5	1	35	42
Eastern Tiger Swallowtail	1	7	27	1	24	31
Spicebush Swallowtail	6	1	25	1	3	5
Cabbage White	22	284	511	120	607	353
Clouded Sulphur	2	12	35	2	2	42
Orange Sulphur	29	340	103	10	154	115
American Copper	62	2	6			5
Bog Copper	21					
Coral Hairstreak	8	3	7	7		
Acadian Hairstreak				8		
Edwards' Hairstreak			7	4		1
Banded Hairstreak	11	31	75	19	2	28
Hickory Hairstreak		4	37	4		4
Striped Hairstreak	2	1	2	15		1
Juniper Hairstreak					2	2
Gray Hairstreak	1	4			5	
Eastern Tailed Blue	77	71	43	27	53	9
"Summer" Azure	8	9	11	1	3	1
Northern Metalmark			46			
Variegated Fritillary	2					
Great Spangled Fritillary	1	243	683	97	29	65
Aphrodite Fritillary			4			
Silver-bordered Fritillary					7	
Meadow Fritillary			16	1		1
Pearl Crescent	34	99	84	36	193	288
Baltimore Checkerspot			33	1		1
Question Mark	1	8	14	1	9	16
Eastern Comma		3	19	3	3	35
Compton Tortoiseshell			11	3		
Mourning Cloak	1	3	26	1	1	5
Milbert's Tortoiseshell						18
American Lady	17	25	91	2	22	29
Painted Lady		1	12		22	7
Red Admiral	4	76	117	18	88	1767
Common Buckeye	1	1				
"Red-spotted Purple"	2		48	3	7	3
Viceroy			1		7	3
Hackberry Emperor			2		1	
Tawny Emperor			5			
Northern Pearly-Eye		5	17	10		1
Eyed Brown				25		1
Appalachian Brown	2	13	23	15	2	8
Georgia Satyr	19					
Little Wood-Satyr	27	357	10	19	14	19
Common Wood-Nymph	112	481	323	472	72	181
Monarch	3		9	3	25	42
Silver-spotted Skipper	6	24	226	10	35	6
Hoary Edge	1	1	5	3		
Northern Cloudywing	4		1	6		
Horace's Duskywing	1	1			2	
Wild Indigo Duskywing		23			348	
Common Checkered Skipper				1	4	5
Common Sootywing	1					2
Swarthy Skipper	14	1				
Least Skipper	1	276	32	46		25
European Skipper	1	51	39	3		2
Dotted Skipper	5					
Peck's Skipper		16			2	
Tawny-edged Skipper	4	5	2	2		
Crossline Skipper	7	14	9	1		
Northern Broken Dash	1	205	17	8	4	1
Little Glassywing	7	530	344	30	10	12
Sachem					22	
Delaware Skipper	5	66	233	58	7	22
Mulberry Wing		5	11	9	33	
Hobomok Skipper		1				
Zabulon Skipper		2				
Broad-winged Skipper			1	1		
Dion Skipper		14	5	5	2	
Black Dash		88	68	43	61	6
Two-spotted Skipper	4					
Dun Skipper	5	121	290	198	13	37
TOTAL SPECIES	43	46	51	47	40	43
TOTAL INDIVIDUALS	543	3531	3771	1349	1935	3198