

Massachusetts Butterflies



Spring 2011, No. 36

Massachusetts Butterflies is the semiannual publication of the Massachusetts Butterfly Club, a chapter of the North American Butterfly Association. Membership in NABA-MBC brings you *American Butterflies*, *Butterfly Gardener*, *Massachusetts Butterflies*, and our spring mailing of field trips, meetings, and NABA Counts in Massachusetts. Regular NABA dues are \$30 for an individual, \$40 for a family, and \$60 outside the United States. Send a check made out to NABA to: NABA, 4 Delaware Road, Morristown, NJ 07960. An “MBC only” membership is \$15, and includes a subscription to *Massachusetts Butterflies* and all club mailings. Send a check made out to Massachusetts Butterfly Club to our Secretary, address below.

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CONTENTS

- 3 The Club Website --- Thoughts and Thanks from
Your Erstwhile Webmaster

Dale Rhoda

- 14 The Worthington “Canola Whites”

Barbara Spencer

- 19 Cherry Gall Azures—A Photo Essay

Mark Rainey

- 23 2010 Season Summary and Records

Erik Nielsen

- 43 Egg Stories

Sharon Stichter

*Cover Photo: Aphrodite Fritillary (Speyeria aphrodite), by Frank Model
Tully Dam, Royalston, July 13, 2010*



The Rhoda Family, Autumn 2010

The Club Website

Thoughts and Thanks from Your Erstwhile Webmaster

Dale Rhoda

I first became interested in butterflies while fly-fishing on the White River in Arkansas in 1994. During a lunch break under a shade tree I saw what I first assumed were a couple of leaves twirling to the ground. On closer inspection they were a courting pair of butterflies. I was fascinated first by the single-minded pursuit and then by the languorous liaison that ensued. I realized that I had never *really* looked closely at butterflies before and that they were fascinating. I wrote a poem about that day entitled *The Natural State* (see page 13) and I vowed to learn more. Soon afterward I moved to Texas for a few years, and although I joined NABA and read *American Butterflies* faithfully, I didn't meet other enthusiasts until I returned to Massachusetts and joined the Massachusetts Butterfly Club (MBC) in 1999.

I showed up for my first MBC field trip on 8/7/99 with a brand-new pair of close focus binoculars and a brand-new copy of Glassberg's *Butterflies through Binoculars – The East*. Sharon Stichter was the trip leader and I was the only other attendee. She answered my questions patiently, showed me my first Monarch egg and pointed out the sawing motion of the hindwings of Eastern Tailed-Blues. After our day in the field I renewed my 1994 vow to learn more and thereafter I toted a tattered Glassberg and those trusty binoculars on my work-related travels around the country.

At the MBC's 2002 annual meeting Madeline Champagne announced that the club was looking for a volunteer to take over the website from the fine folks at the Athol Bird and Nature Club. I didn't know anything about creating websites, but I was intrigued. I contacted a knowledgeable friend who assured me that I could learn enough to be effective in short order so I agreed to take it over. At the time, the website was literally one long web page with a single photo of an Eastern Tiger Swallowtail. Jim Springer at NABA helped us move the site to the NABA web server where we have enjoyed free hosting and excellent service ever since. We registered the domain name www.massbutterflies.org in 2003 and before the year was out we introduced a new look with multiple pages, hundreds of butterfly photographs, and bullet lists of species information written by Brian Cassie.

At that time digital photography was starting to become popular in the club and several members graciously shared their digital photos for the site. Fred Goodwin, Marj Rines, and Dave Small in particular, provided many of the photos that I used in the early days; they were followed by the 30+ photographers who are currently credited on the site's Butterfly Photos page.

My wife Kara and I moved to Ohio in late 2003 so I could pursue graduate studies in systems engineering at Ohio State University. In 2004 I redesigned the website based on feedback and input from club members, professors and classmates. A web design professor encouraged me to show butterfly photos on every page and to mix them up rather than show the same images on the same pages all the time. That was the impetus for the 'Can You ID This Butterfly?' box. Others encouraged me to think about the various types of users of the website and to design interactions that would suit their most common tasks. Some users are butterfly novices

who benefit from being able to see photos of every butterfly species on one page so they can match their photo or specimen to the photos on our website without relying on the names. Others are experts who want to navigate the photos taxonomically or by species name without waiting for hundreds of thumbnail photos to be downloaded and displayed. I designed the photo pages so that users can navigate from one species page to any other species page in as few as two clicks and they can narrow their view to a single family or even a genus at a time or they can always go back and look at thumbnail versions of all of the club's photos on one page.

The photos have turned out to be very popular, not only among our own club members, but also with people browsing from other parts of the country and other parts of the world. Although NABA doesn't formally track which websites receive the most "hits", when they have reviewed their webserver logs in a spot-check fashion, the most popular NABA webpage by far has been our club's page that shows photos of individual species.

Rather than rely on static HTML documents to build the site, I built it using some programming building blocks in a language called ASP, or Active Server Pages. Each page runs a program that generates its content on the fly every time it is accessed. Much of the code is re-used across the site. The metadata about each photo, for instance: the photographer, location, species, copyright information, and date are kept in a single location and any page that shows that image, either as part of a species page or part of the butterfly ID quiz, uses a single file to lookup the photo information. The menu at the left side of most of the pages is also re-used across the pages. And the look and feel of the pages, the colors and fonts and layout, are controlled using cascading style sheets, so if we decided to change the default font, we would only need to change it in one location and the change would propagate

across all the pages. I had a lot of fun designing how the pages would look and how the ASP programs would generate them and how we would incorporate new photos over time. Behind the ASP, I have another layer of programs written in a language called AWK (which stands only for the last names of the three guys who invented the language). The AWK programs read info from a spreadsheet that describes the photos and then the AWK code writes the ASP code that works with photos. To update the photos, I simply update the spreadsheet, upload the photos, re-run the AWK programs, and upload the resulting ASP programs. Other designers would undoubtedly come up with other solutions, but this design has served us well since 2004. I haven't had to write new software over that time to grow the photo collection from a few hundred to a thousand photos. Frank Model and I just update the info in the spreadsheet and then the AWK programs rewrite the ASP programs and voilà, the website knows all about the new photos and renders them correctly.

The side-by-side feature (see photo) has some nifty code behind it, too, that detects the width of your browser window and resizes the butterfly photos to fit the window. In the early days of digital photos many of the photos were small and screen resolution was small. Now photos are much larger and can reveal much more detail. Newer photos will often be too wide to fit on a screen and far too wide to fit on half the screen in side-by-side mode, so the website resizes large photos to fit the available space. If the browser has shrunk the photo then it displays a magnifying glass under the caption. Clicking that icon will re-render the photo in its full resolution.

In 2006 we leveraged another of the club's rich information assets by scanning and posting, under Sharon Stichter's leadership, the



Massachusetts Butterfly Club

Side-by-Side Butterfly Comparison

Exit Side-by-Side Mode

Viceroy - *Limenitis archippus*



Monarch - *Danaus plexippus*



old issues of *Massachusetts Butterflies* from # 1, currently up through #29. There have been other improvements and partnerships along the way, as detailed in the timeline box on page 11. One substantial improvement occurred in 2007 when Bill Benner recruited Frank Model to help me process a backlog of photos. Frank worked tirelessly cropping photos and entering the information about them into a spreadsheet and over the course of a few weeks he more than doubled the size of our photo collection, bringing it up to the current count of 1001 photos.

In 2006 I shifted my career focus away from engineering. I am currently finishing a PhD in public health with a major concentration in biostatistics and minor concentration in epidemiology. I work full time as a biostatistician for Battelle Memorial Institute, which is the world's largest non-profit contract research firm. My part of the business is named the Centers for Public Health Research and Evaluation. I work with teams of very talented researchers on fascinating health-related issues. It's a terrific job.

In 2008 Kara and I adopted our first child, Nathaniel. I'm happy to say that he is a bug lover, with a special affinity at this time for bees, due largely to his love of honey and Burt's Bees Lip Balm. He loves to look thru his Daddy's special "g'noculars". In June of 2010 we adopted our second son, Benjamin, who wants to be in the middle of whatever the rest of us are doing. Although parenthood and my schooling have curtailed my time in the field for the last few years, I suspect that Kara will be eager to send us boys off on field trips in the years to come so she can enjoy a little peace and quiet at home.

I should also mention that I've had an opportunity to combine my love of statistics with my love of butterflies in serving as a data management and statistical consultant on Rich Bray's Rocky Mountain National Park Butterfly Project. You may have seen it described in the New York Times in 2008: (http://www.nytimes.com/slideshow/2008/10/23/business/retirement/20081023_PARKS_index.html) In a couple of years we will be reporting on 15 years of butterfly transect data from the Park. It is a fascinating project. Watch for more on that in the future.

I have been fortunate enough to work on some important and interesting projects through the years, but the MBC website is one of the two or three things that I am most proud of. It has been a lot of fun to have the Club's best photographers send me their wonderful photos through the years. I have enjoyed working with four sitting MBC presidents (and Brian Cassie whose term was over before mine started) who supported, guided, and encouraged my ideas; two terrific records keepers; and our passionate and professional editor of *Massachusetts Butterflies*.

My priorities these days are to devote a lot of time to my family and to finish my PhD research so I need to cut back on

extracurricular activities. Although I am giving up the MBC webmaster position, I do have a handful of ideas for fruitful avenues of development. As food for thought, I have listed some of those ideas in the box entitled “What Would I Do If I Won MegaBucks....”

Although I will live in Ohio for an indefinite period into the future, I intend to maintain my MBC membership and I’ll try to get back from time to time during the fair weather months to join you in the field. Thank you for entrusting me with your website over the past eight years. Thank you for your contributions to the site in the forms of suggestions, typo corrections, photos, and other content. And thank you for your notes of encouragement and appreciation from time to time. It has been a privilege to be your webmaster and I look forward to continuing our relationships, even from afar.

Warm regards,
-Dale



What Would I Do If I Won MegaBucks and Could Be MBC Webmaster Fulltime?

- Add the ability for people to comment on any photo, or really on any item on the web page, à la Facebook. Philip Greenspun pointed out over a decade ago that this is what would foster community online. It has always been an important component of his popular website, www.photo.net. I've been meaning to add the capability, at least to our photo pages, for quite a few years now.
- Optimize a version of the website for viewing on handheld devices (i.e., iPhone)
- Develop a butterfly ID tool for use on smart phones
- Incorporate the one remaining HUGE informational asset of the club, the database of butterfly observations, into the website.
 - Add an interface for people to use to submit their observations
 - Write a smartphone app that lets people record observations in real time with a photo and a geo-tag from the phone's GPS
 - Add ways to query the database interactively and provide output in lists or on maps or with timelines
- Add more history and ecology information about each species. (I am delighted to say that this hole is being beautifully filled with Sharon Stichter's new website, *Butterflies of Massachusetts*. The information there will complement the photos on the MBC website in ways that are unparalleled, as far as I know, by any other websites.)
- Add more biological information, especially larval photos and host plant photos to the site.
- Add more large photos in all their glorious resolution and detail, like the last two on the current Canadian Tiger Swallowtail page. (Click the magnifying glass to see them at full resolution.)

MBC Website Timeline

- 2002 Dale takes over from Athol Bird & Nature Club; total photos on website = 1; total pages on website = 1
- 2003 New look; new address: www.massbutterflies.org; photos = 332; pages = 14
- 2004 New look and feel; side-by-side photos; random butterfly photo to ID; total photos = 469; total pages ~130
- 2005 Prototype butterfly ID tool (still available at www.daleandkara.net/ise775) adopted for kiosk use at Boston Nature Center
- 2006 Partnered with Mass Audubon; we link to their species pages and they link to ours
- 2007 Posted PDF versions of back issues of *Massachusetts Butterflies*; Frank Model serves as photo coordinator, processes a backlog of photos and ensures that we have photos of every Massachusetts species, eventually pushing our photo collection up to 1,001 photos
- 2008 Added page on Butterfly Conservation; added Dick Walton movies
- 2010 Added Sam Jaffe's 2009 field notes PDF with links to 199 caterpillar photos on his website
- 2011 Partnering with Sharon Stichter's Butterflies of Massachusetts website www.butterfliesofmassachusetts.net ; we link to her species pages, and she links to ours



Dale's Design Influences:

- Friend and Web Goddess, Sarah Peeler Merrill who said “You can do this; it isn’t hard.”
- Two books by MIT author and photo.net inventor, Philip Greenspun: *Database-backed Web Sites* and *Philip & Alex's Guide to Web Publishing*
- *Web Pages That Suck: Learn Good Design by Looking at Bad Design*, by Vincent Flanders and Michael Willis
- Coursework with Ohio State University professors Philip Smith and R. Brian Stone
- Conversations with Ohio State University classmate and thoughtful designer, Mike Rayo

Dale's Assessment of the MBC's Important Assets (The Website Capitalizes on Some Better Than Others)

- Terrific collective photo collection, a small portion of which appears on the website
- Butterfly observation database
- *Massachusetts Butterflies*
- Club members' knowledge, both documented and undocumented, about butterfly ecology and about where and when to find Massachusetts' butterfly species
- The sense of community; the friendships that result from common interests and shared experiences, and opportunities to learn from each other



The Natural State

Under a tree in Arkansas
I saw two butterflies mating.
They exchanged brief vows beneath some boughs
And commenced to consummating.

Their ceremony was simple
With God as their judge and no lawyers.
The Tree and I signed as witnesses
Then commenced to being voyeurs.

The courtship that started that day in the sky
I attribute to a fortunate breeze.
Each partner had flown for miles on high
Dancing solo among the trees.

As He and She approached the spot
Where the Tree and I were waiting
Neither one seemed to have a care
Nor to be intent on dating.

They drifted along quite aimlessly
Not minding which way they went
Until they blew into our glade
When their paths took a calculated bent.

Each noticed the other and then looked back
And circled for another pass.
They must have liked what they saw next
'Cause they spiraled into the grass!

Now it would not be polite to describe
The rest of this afternoon affair.
So I'll choose a cliché' over details risqué
Put simply: There was Love in the Air!

Dale Rhoda

The Worthington “Canola Whites”

Barbara J. Spencer

On August 28, 2010, there was an epic scene in a 200- acre field planted to "Roundup Ready" canola (*Brassica napus*) in Worthington, Massachusetts. Huge numbers of non-native Cabbage White butterflies (*Pieris rapae*), were rising and falling like snowflakes caught in eddies all across the field. Clusters of whites covered the goldenrod that lined the ditches and the edges of the field, and wet spots held hundreds of puddling whites. The number of whites did not diminish as one gazed across the half-mile wide field. I was alerted to the spectacle by a friend who had seen a huge mass of whites gathered at one large wet spot near the road the previous evening. A local man said the butterflies had been there all summer, but never in numbers such as these. Initial reaction was there had to be a million butterflies in that field. Such abundance! [Roundup Ready is the commercial trade name for crops genetically engineered for resistance to the herbicide Roundup.]

This huge field is well known locally for its arresting beauty when completely planted to sunflowers. Years ago it was a potato field; more recently the acreage has been used for soy beans as well as corn. Because of the treatments with the herbicide Roundup, the crop in 2010 was truly a brassica monoculture perfectly suited to hosting three or four generations of Cabbage Whites last summer. It smelled strongly of cabbage when warmed by the sun. This was the first season that Canola was planted there. According to a

Google search Canola is a trademark for a hybrid variety of rapeseed originally bred in Canada. Canola is an acronym for CANadian Oil Low Acid. It is often grown for use as biodiesel fuel rather than for human or animal consumption, although the low erucic acid content makes food use possible.

Google Earth located the field at 42° 24'28.00 N and 72° 55'18.63 W, just east of the Five Corners on Route 143. It extends to the south to border on Old Post Road. The elevation is 1488 feet.

On August 29, the day after my first visit, abundant dispersal of the whites away from the field was evident. As the site was approached by road, the numbers of whites increased, with lawns, roadsides and ditches covered with Cabbage Whites. The main field remained intensely active, and large numbers of butterflies seeking minerals continued to crowd the wet spots. Several Mass Lep visitors arrived to check out the sights and were amazed at a density of butterflies seldom seen outside the tropics. One visual estimate was of a half million butterflies. Putting firmer numbers on the estimates was a challenge. One observer chose one butterfly on every ten square feet as a measure and reached a total of 877,000 butterflies. Another observer estimated ten per square yard and arrived at close to a million butterflies in the field. It is interesting how close these estimates were to initial impressions. Mating pairs were observed that day, August 29th, and the number of puddling individuals was reduced as the damp spots dried. Two days later clusters of whites were common more than half a mile away. At the same time, numbers in the field did not appear diminished. A visitor on the first of September commented on the dazzling activity with chasing and mating. Whites were frequenting wild mustard as well as the canola, and eggs were easy to find.

By September 7th the ground was dry and there was no puddling or seeking minerals. On September 10th, a windy day, there were no whites flying although some flushed from the grass along the road in the field. Numbers were much reduced on the 17th after a good rain. Only very worn males were seen. On October 10th a huge harvester appeared in the center of the field and it appeared the crop was about to be cut. On the 13th the canola still stood and zero whites were seen. The crop was still standing on November 5th and was not cut until near the end of November. The acreage probably was planted on more than one date as stretches of the canola appeared to represent different stages of maturity. On December 4th the field had been reaped although some canola remained uncut along the west edge of the field.

Accompanying this saga were many intriguing questions regarding how this explosion of whites occurred and what, if anything, to do about it. Views can be summed up as ranging from "magnificent display of nature's abundance" to "off with their heads". One of the most intriguing questions centered on the absence of parasitoids and predators. Where were they and why weren't they in stronger evidence? The butterflies are more mobile than their predators and had the time advantage in populating the field. According to a posting from the Florida Department of Agriculture, general predators include shield bugs and ambush bugs (Hemiptera Phymatidae and Phymatidae) and vespids wasps (Hymenoptera Vespidae). Under high density conditions a granulosus virus can attack with high mortality. Some comments suggested spraying the field to kill the flying whites as a control measure. However, the grower had leased the field, lives thirty miles or so away, and did not visit the field during most of the summer. The crop was intended for biofuel, and was grown as cheaply as possible. Roundup, which is a weed killer and has no insecticidal properties, was applied a couple of times; no insecticides were used. Since the

canola was "Roundup Ready" a vast monoculture of Brassica was produced. The whites found a perfect site to reproduce unhindered as their predators did not show up in any numbers in this new environment. The farmer apparently did not wish to pay to have the field sprayed, and there was doubt about the timing and efficacy of spraying anyway. A large dispersal of whites had already occurred and frost was approaching. In any case no insecticide was applied.

This unprecedented event is probably non-repeatable unless the field is planted to canola again next year, although reason suggests that there must be plenty of Roundup Ready canola seed left in the field after harvest that will be resistant to herbicides. Certainly the agricultural practices involved should be reviewed. One has to assume that the numbers of whites in the area will be higher than usual during the next season. General predators on whites include birds and insects such as mantids, as well as wasps.

Most biocontrol agents are parasitoids. Parasitoids kill the host and are used in population control. Perhaps the parasitoids will catch up to the whites enough in numbers to reduce the population in 2011. According to Jeff Boettner of the Plant, Soil and Insect Sciences lab at UMASS-Amherst, Cabbage Whites have two primary parasitoids, both introduced for biological control, and one virus. The first parasitoid used in Massachusetts was *Cotesia glomeratus*, a gregarious wasp which produces 10-60 wasps per caterpillar. This species was widespread in New England as recently as the 1980's. The second more recent parasitoid introduction, *Cotesia rubecula*, came from China in 1988 and was first released in Deerfield, Massachusetts, and later in 17 locations throughout New England. *C. rubecula* produces only one wasp per host, but is very effective. It was widely recovered throughout New

England by 2002. Van Driesche (2008) found *C. rubecula* may have now nearly completely displaced *C. glomerata* in Massachusetts. This is exciting news for Massachusetts butterflyers because *C. glomerata* was also found using the native *Pieris napi* or Mustard White, as a host, and may have played a role in this native white's decline. *C. rubecula*, however, appears to prefer Cabbage Whites, and to have little effect on the native *P. napi* in the field. If *C. rubecula* does continue to cause the disappearance of *C. glomerata*, this could soon allow *Pieris napi* to recolonize areas from where it has disappeared. Dr. Van Driesche (at UMASS-Amherst) has a graduate student, Meg Herlihy, currently studying these interactions. It will be interesting to observe and monitor the development of these interactions and the numbers of "Canola Whites" in the coming season. The incredible record high count of close to one million butterflies in 2010 will probably remain in place in Massachusetts for a good many years.

Reference:

Van Driesche, R. G. 2008. Biological Control of *Pieris rapae* in New England: Host Suppression and Displacement of *Cotesia glomerata* by *Cotesia rubecula* (Hymenoptera: Braconidae). Florida Entomologist 91 (1):22-25.

Notes:

Many thanks to Jeff Boettner for his input into this article.

For a dramatic photo of the Worthington Whites, see the cover of *Massachusetts Butterflies* No. 35, Fall 2010.



The Cherry Gall Azure (*Celastrina serotina*): A Photo Essay

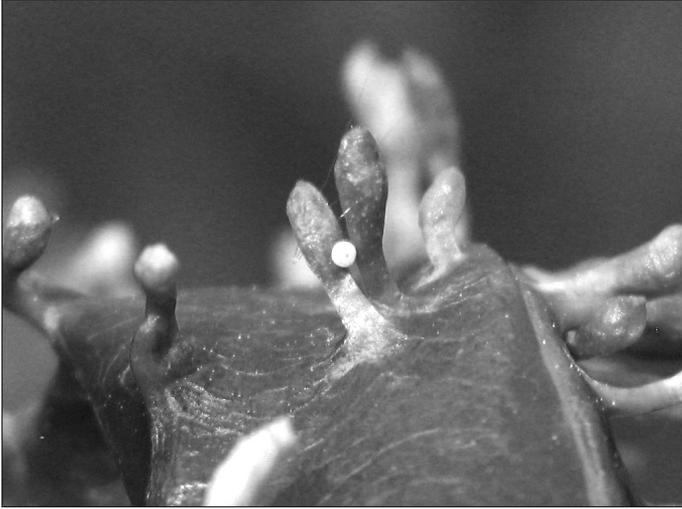
Mark Rainey

While visiting Juniper Hill in Lexington in early May 2010 I observed a Cherry Gall Azure ovipositing on the leaf galls of a Chokecherry (*Prunus virginiana*). In the subsequent weeks I returned to document the life cycle of this recently described species. All of the following photos are of two adjacent leaves on that Chokecherry tree.

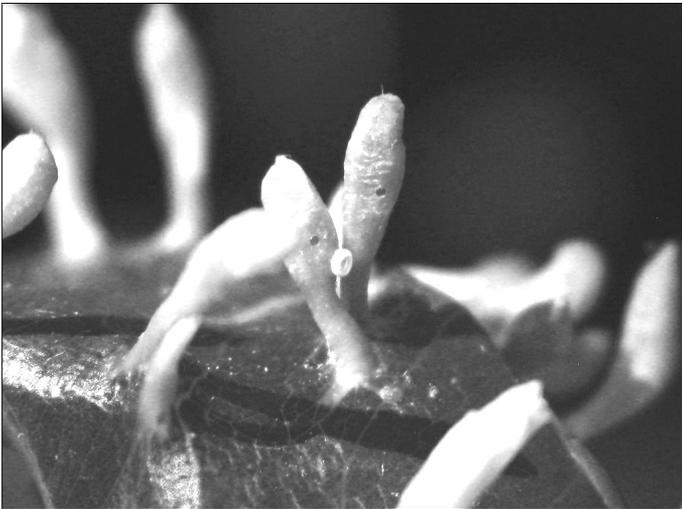


A Cherry Gall Azure oviposits on a Chokecherry leaf gall. The galls are abnormal growths caused by the presence of eriophyid mites. 5-2-2010

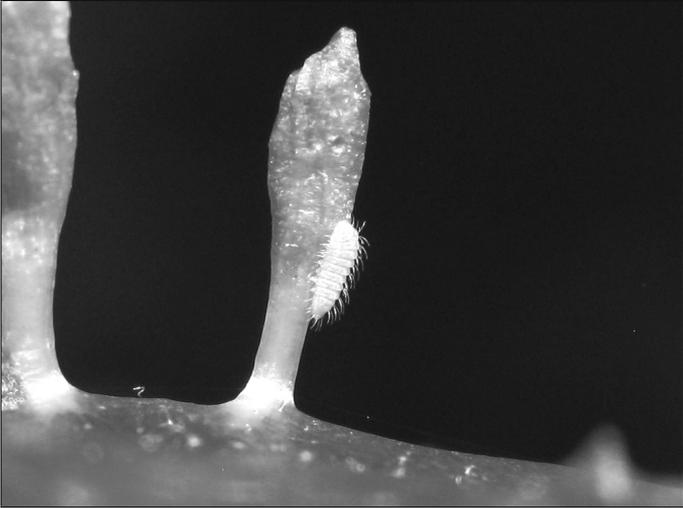
Mark Rainey lives in Belmont. He thanks Harry Pavulaan for his comments on this article.



At the front of the egg (the same egg that was laid in the previous picture) is a small hole called a micropyle, where the sperm entered to fertilize the egg prior to oviposition. 5-2-2010



After about a week of development, the larva eats its way out of the egg, leaving behind the empty egg case. 5-16-2010



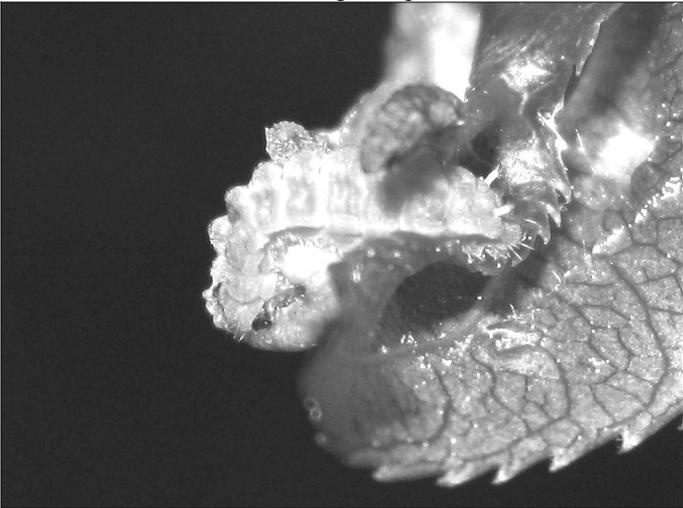
An early-instar larva, covered with small hairs called setae, feeds on a gall. The larva bores a hole into the side of the gall and consumes the insides, and will later devour entire galls. 5-16-2010



After another two weeks, the larva has reached the late-instar stage and is tended by ants, as are many lycaenids. The late-instar larva has several specialized organs that play a role in its relationship with ants. 5-31-2010



The oval structure near the rear of the larva (at the right in this picture) is the dorsal nectary organ, which produces “honeydew” that ants consume. In return, the ants defend the larva against predators. 5-30-2010



To the rear of the dorsal nectar organ is a pair of tentacle organs, which are normally retracted inside the body but can be extended, as in this picture (the two white “tentacles” at the right side). These organs are believed to play a role in attracting and alerting ants. 5-30-2010

2010 Season Summary and Records

Erik Nielsen

Over 7400 records were received for the 2010 season. Thank-you to the many observers submitting records either directly to me or posting their sightings on the MA butterfly list server. Following the NABA checklist the number of species reported for 2010 was 102 – or 104 counting Cherry Gall and Summer Azures as full species.

Unfortunately it's not possible to fit more than a fraction of the total records in the allotted space. This does not mean that they aren't important; all reported butterflies are logged in the database and add to the picture of the health of our various butterfly populations in the state. The tables in the summary are generated from this data.

The first column gives the % change in the average number seen on a visit to a location on a specific day in 2010, compared to the average for the preceding years. The second column gives the % change in how frequently a species was reported, the third column lists the % change in the maximum count reported, and the last column the % change in how many localities it was reported from. The fields are “color coded” to make it easier to quickly see how many species saw large changes and those for which the numbers were in the “normal” range. Black text on a white background indicates that the numbers for 2010 were twice the previous years' average. White text on a dark gray background indicates numbers half or less, and black text on light gray numbers in the “normal” range somewhere between the two extremes.

SWALLOWTAILS

Giant Swallowtails are rarely seen in Massachusetts; but in 2010 no less than 4 were reported, making them almost as “common” as Pipevine Swallowtails for the year, and for the first time they were seen in the eastern half of the state.

%Change in 2010 from the 1994-2009 average				
English Name	Avg. No	Frequency	Max. No	Localities
Black Swallowtail	43	46	19	23
Tiger Swallowtail (spp)	28	11	99	56
Eastern Tiger Swallowtail	52	36	85	51
Canadian Tiger Swallowtail	185	170	48	134
Spicebush Swallowtail	21	24	-6	31

From the above table it appears that Swallowtails fared well in 2010 with just about all categories registering on the plus side. The easternmost report of Canadian Tiger Swallowtail was unusual by being very early on April 21 and as far east as Arlington.

WHITES AND SULPHURS

%Change in 2010 from the 1994-2009 average				
English Name	Avg. No	Frequency	Max. No	Localities
Mustard White	67	-38	113	7
West Virginia White	-21	-20	-38	-29
Cabbage White	49870	6	143681	44
Clouded Sulphur	95	26	150	55
Orange Sulphur	-58	-42	-75	-4
Cloudless Sulphur	-80	-48	-86	-22

Mustard White was reported in good numbers; but West Virginia White continued its downward slide with the numbers in all 4

categories being lower than the average from the previous 16 seasons. Cabbage White numbers on the other hand were way up, boosted by the counts from a single field. On August 27 Barbara Spencer was alerted by a neighbor to “an epic scene” in a field planted with rape in Worthington where Cabbage Whites were flying huge numbers (see accompanying article in this issue). By projecting spot counts over the roughly 200 acres of the field the number was eventually estimated to somewhere in the neighborhood of 800,000 (“give or take a lot”). Clouded Sulphur numbers were above average, but Orange had a fairly poor showing. The latter did, however, fly later than any other butterfly in MA when one was seen in Westport on November 21.

GOSSAMER-WINGS

%Change in 2010 from the 1994-2009 average				
English Name	Avg. No	Frequency	Max. No	Localities
Harvester	-79	-28	-88	-15
American Copper	28	35	-27	44
Bronze Copper	196	100	388	85
Bog Copper	-13	-46	-18	-48
Coral Hairstreak	-7	2	-21	-15
Acadian Hairstreak	-49	9	-62	-45
Edwards' Hairstreak	-36	12	-66	-33
Banded Hairstreak	-37	-33	-48	-47
Brown Elfin	70	36	30	8
Hoary Elfin	16	59	-11	50
Frosted Elfin	165	202	-22	61
Henry's Elfin	22	13	-15	15
Eastern Pine Elfin	-30	-5	-46	-4
Juniper Hairstreak	-76	-30	-84	-42
Gray Hairstreak	13	38	33	29
Eastern Tailed-Blue	-4	17	-46	41
Silvery Blue	-13	-20	-43	-17

From the above table it would appear that Harvester fared quite poorly in 2010. As with Cabbage White this statistic is largely skewed by the numbers (or in this case, the lack thereof) from a single locality. In the last few years large numbers of Harvesters were seen at the Mystic Lakes on the Arlington/Medford line. They were still seen there in 2010, but not in the same quantities.

Bronze Coppers were found away from their Sudbury River Valley stronghold again this year with one at Appelton Farms TTOR in Hamilton/Ipswich and three at Millennium Park in Roxbury. A MBC field trip to the Sudbury Fiver Valley on September 25 turned up a total of 42. Bog Copper didn't do quite as well. Both their overall counts and number of places they were found were noticeably down. Hairstreak numbers were disappointing as well. Their flights seemed to have started earlier than usual; but the counts were generally low and petered out fairly early. As in 2009 only a single Hickory Hairstreak was reported. No Bog Elfin was found in 2010; but most of the other Elfins were reported good numbers. White M Hairstreaks got off to an early start with one in Palmer on April 23. Others were seen in May, June and September (several). Early Hairstreak was almost missed again this year; but a trip up Mount Greylock on May 30 succeeded in locating three. Azures were reported in good numbers. Spring Azure got a new "High Count" when 851 were tallied at Myles Standish State Forest on April 14. More people are getting confident in separating the different species (or forms – depending on your point of view) and a clearer picture of their flight times is now starting to emerge.

BRUSHFOOTED BUTTERFLIES

American Snout is not an annual visitor to Massachusetts, and when they do appear it's usually in the fall somewhere on the south coast, so one in Windsor on May 20 was quite unusual.

%Change in 2010 from the 1994-2009 average				
English Name	Avg. No	Frequency	Max. No	Localities
Variegated Fritillary	-84	-70	-88	-57
Great Spangled Fritillary	74	54	196	43
Aphrodite Fritillary	-8	-35	105	-23
Atlantis Fritillary	-74	-15	-79	13
Silver-bordered Fritillary	-86	24	-95	30
Meadow Fritillary	-3	74	-53	67
Harris' Checkerspot	-86	-42	-86	-47
Pearl Crescent	162	56	148	57
Baltimore Checkerspot	-34	87	-45	53
Question Mark	-28	6	-75	16
Eastern Comma	42	66	1	35
Compton Tortoiseshell	-66	-77	-31	-76
Mourning Cloak	-49	-31	-33	-4
Milbert's Tortoiseshell	-71	-49	-72	-55
American Lady	22	21	29	34
Painted Lady	-62	-24	-64	-13
Red Admiral	17	161	-76	149
Common Buckeye	-1	13	-43	21
White Admiral	-65	-21	-46	-18
Red-spotted Purple	-28	18	-36	13
Viceroy	48	32	34	17
Northern Pearly-Eye	-6	28	-52	34
Eyed Brown	11	42	-38	8
Appalachian Brown	61	59	6	53
Little Wood-Satyr	5	0	173	15
Common Ringlet	27	8	-27	24
Common Wood-Nymph	5	-9	-4	3
Monarch	-82	-5	-93	30

2010 seems to have been a good year for Great Spangled Fritillary with its numbers being up in all four categories. Aphrodite and Atlantis counts were not as poor as in some of the recent years; but their numbers still mostly lagged behind the 1994-2009 averages. Harris' Checkerspots were only sparsely reported. Their numbers, how frequently they were seen and in how many places were all down again this year. No real populous colonies of Baltimore Checkerspots were found; but they were well reported from more than usual localities. A Green Comma was reported from Windsor on September 22. Unfortunately it could not be relocated on a return trip the following day. A Gray Comma was documented with several photographs in Williamstown on August 28.

SKIPPERS

Silver-spotted Skipper counts were all on the plus side; but Hoary Edge, both Cloudywing and Dreamy Duskywing all had a poor showing. The numbers for the other Duskywing, however, were up in most categories. Horaces' and Sleepy both had an especially good year, with good counts and reports from more areas than usual. Arctic Skipper is never very common; but only low numbers were reported in 2010 and only from two locations. European Skipper, while still fairly common, had counts below the average for the second year in a row. Only a few years ago Zabulon Skipper was a rare sight in the spring and unheard of in eastern Massachusetts. In 2010 their spring flight got off to a very early start with one in East Longmeadow on May 8. Further east they were found in Dartmouth on May 22 to June 3 and in Fowl Meadow in mid June. The threatened Dion Skipper also had a strong showing. Until last year when a colony was found in Florence, it was only known from a few spots in Berkshire County.

In 2010 it was found in a couple of additional locations in Williamsburg and Cummington.

%Change in 2010 from the 1994-2009 average				
English Name	Avg. No	Frequency	Max. No	Localities
Hoary Edge	-64	-48	-67	-57
Southern Cloudywing	-66	-45	-57	-29
Northern Cloudywing	-37	-15	-39	7
Dreamy Duskywing	-27	-20	-29	-12
Sleepy Duskywing	166	100	50	102
Juvenal's Duskywing	103	64	-29	78
Horace's Duskywing	99	110	101	116
Wild Indigo Duskywing	84	72	43	89
Common Sootywing	42	82	-52	15
Arctic Skipper	-56	-47	-69	-38
Least Skipper	-16	10	-46	21
European Skipper	-91	-27	-91	-5
Leonard's Skipper	-31	12	-32	22
Cobweb Skipper	-40	-23	-24	-27
Indian Skipper	28	35	16	14
Peck's Skipper	50	32	195	50
Tawny-edged Skipper	28	45	-2	27
Crossline Skipper	-12	9	-53	31
Long Dash	-14	-15	-41	-16
Northern Broken-Dash	182	52	381	38
Little Glassywing	102	74	84	58
Delaware Skipper	72	74	166	64
Mulberry Wing	81	91	-6	77
Hobomok Skipper	9	18	-7	8
Zabulon Skipper	103	297	-64	47
Broad-winged Skipper	37	66	-9	79
Black Dash	160	74	103	21
Dun Skipper	79	47	19	48
Pepper and Salt Skipper	81	75	30	29

Fiery Skippers were seen in good numbers in September and October. Sachems also made a decent fall showing, but only in the

Westport-Dartmouth area. Common Roadside-skipper was nicely documented with several photos on Mount Greylock June 4th.

Perhaps due to the warmer than usual temperatures for each month (except December) of 2010, a remarkable total of 29 species had new “Early Flight Dates” in 2010. They were: Tiger Swallowtail (probably Eastern) – April 2, Canadian Tiger Swallowtail – April 21, Clouded Sulphur – April 3, American Copper – April 4, Coral Hairstreak – June 21, Edwards’ Hairstreak – June 11, Banded Hairstreak – June 11, Hickory Hairstreak – June 18, Oak Hairstreak – June 11, Frosted Elfin – April 8, Henry’s Elfin – April 4, White M Hairstreak – April 23, Eastern Tailed-Blue – April 15, Cherry Gall Azure – May 2, Silvery Blue – April 15, Great Spangled Fritillary – June 1, Pearl Crescent – May 1, Question Mark – March 20, Eyed Brown – June 5, Common Ringlet – April 4, Hoary Edge – April 21, Northern Cloudywing – May 1, Horace’s Duskywing – April 20, Indian Skipper – May 15, Tawny-edged Skipper – May 14, Zabulon Skipper – May 8, Broad-winged Skipper – July 2, Dion Skipper – June 27, Dusted Skipper – May 13.

Six species had new “Late Flight Dates”: Pipevine Swallowtail – October 9, Meadow Fritillary – October 11, Gray Comma – August 28, Appalachian Brown – September 15, Horace’s Duskywing – September 24, Dun Skipper – September 25.

New High Counts were obtained for six species:

Cabbage White – 800,000, Bronze Copper – 26, Spring Azure – 851, Cherry Gall Azure – 20, Northern Broken-Dash – 200, Dusted Skipper – 110

Pipevine Swallowtail

8/26 1 Northampton CG - Tom Gagnon
9/26 1 Wayland CG - Jason Forbes
10/9 1 Aquinnah - Pete Gilmore+Lanny McDowell
10/9 1 AP, Dartmouth - Steve Moore+Barbara Volkle

Black Swallowtail

4/24 2 F&G Fields, Westborough - Wendy Miller
4/30 1 Sherborn PL - Bob Bowker
4/30 2 Weir Hill Res, N Andover - Hoople+Hopping
5/1 1 HPM, Woburn - Mark Rainey
5/2 1 Muddy Brook, Ware - Brian Klassanos
5/7 10 GBH, Canton - Sam Jaffe
6/4 3 Nat's Farm, W Tisbury - Matt Pelikan
6/26 3 GBH, Canton - E.Nielsen+R.Hamburger
6/29 1 Graves Farm, Williamsburg - Tom Gagnon#
7/11 2 MMP, Williamstown - Pam Weatherbee
7/11 1 Rowden Yard, Leicester - Mark Rowden
7/18 5 F&G Fields, Westborough - MBC
(S.Moore+B.Volkle)
7/24 11 AF, Hamilton/Ipswich - Russ Hopping
7/31 1 Monterey - Mark Lynch+Sheila Carroll
8/1 1 Cummington - Barbara Spencer
8/1 1 World's End, Hingham - Bob Bowker
9/3 3 Northampton CG - Bill Benner
9/11 6 Wayland CG - Steve Moore+Barbara Volkle
9/19 3 W Bridgewater - Don Adams
10/11 1 AP, Dartmouth - Bob Bowker

Giant Swallowtail

8/5 1 Florence - Tom Gagnon+Bruce Callahan
8/10 1 Whately - Bill Benner+Joe Wicinski
8/17 1 IRWS, Topsfield - Richard Wolniewicz
8/31 1 Park School, Brookline - Brian Cassie

Tiger Swallowtail (spp)

4/2 1 Northborough - Steve Moore
4/8 1 E Longmeadow - Karen Parker
4/20 1 Granby - Madeline Champagne
5/2 6 Muddy Brook, Ware - Brian Klassanos
5/15 10 Quabbin Park, Belchertown - Greg Dysart
5/23 20 MSSF, Plymouth - MBC (E.Nielsen)
5/24 57 Cummington - Barbara Spencer
5/25 80 Hawley - Barbara Spencer
8/29 1 Muddy Brook, Ware - Brian Klassanos
9/29 1 E Longmeadow - Karen Parker

Eastern Tiger Swallowtail

4/22 1 Rocky Narrows, Sherborn - Bob Bowker
4/24 1 AP, Dartmouth - Lauren Miller-Donnelly
4/24 1 Juniper Hill, Lexington - Mark Rainey
5/30 24 Beartown SF, Great Barrington -
M.Lynch+S.Carroll
5/31 12 Sturbridge - Mark Lynch+Sheila Carroll
6/20 4 Muddy Brook, Ware - Brian Klassanos
7/3 28 Old Town Hill, Newbury - Erik Nielsen
7/6 7 Moore SP, Paxton - Elise Barry
7/11 14 New Marlborough - Mark Lynch+Sheila Carroll
7/17 4 Carney Res., Northborough - S.Moore+B.Volkle
7/17 5 Stichter Yard, Newbury - Sharon Stichter
8/8 3 Whately - Bill Benner
8/21 1 Sylvan Nursery, Westport - Madeline Champagne
8/21 8 Cheshire-Savoy - Mark Lynch+Sheila Carroll
9/6 1 E Bridgewater - Eddie Giles
9/18 1 Mount Tom State Res. - Tom Gagnon

Canadian Tiger Swallowtail

4/21 1 Great Meadow, Arlington - Tom Whelan
5/1 2 Leverett - Carl Kamp
5/2 4 S Quabbin - Mark Lynch+Sheila Carroll
5/4 2 Roberts Rd., Sandisfield - Mark Rowden
5/6 1 Rowden Yard, Leicester - Mark Rowden
5/7 49 Shutesbury - Earle Baldwin
5/11 1 Weir Hill Res, N Andover - Howard Hoople
5/15 1 Quabbin Park, Belchertown - Greg Dysart
5/17 1 Mount Tom State Res. - Carl Kamp
5/23 10 Tom Swamp, Petersham - MBC (Tom Gagnon)
5/30 52 Mount Greylock - Tom Gagnon#
6/19 1 Athol - Carl Kamp
7/3 2 Muddy Brook, Ware - Brian Klassanos

Spicebush Swallowtail

5/3 2 Commerce Rd, Hingham - Erik Nielsen
5/10 10+ Chickatawbut Hill, Milton - Sam Jaffe
5/27 1 E Longmeadow - Karen Parker
5/31 6 MHF, Sharon - Erik Nielsen
6/26 4 HPM, Woburn - MBC (Steve Moore)
7/2 3 BMB WS, Worcester - Martha Gach
7/8 3 Maudslay SP, NP - S. Stichter and Bo Zaremba
8/11 4 Stackyard Rd, Rowley - Joe Stichter
9/4 1 Montague - Mark Fairbrother
9/6 1 Crane WMA, Falmouth - Alison Robb
9/16 1 Mount Tom State Res. - Tom Gagnon
9/18 1 AP, Dartmouth - MBC (Lauren Miller-Donnelly)
9/19 1 W Bridgewater - Don Adams
9/25 1 Wayland CG - MBC (Erik Nielsen)
10/9 1 Northampton CG - Tom Gagnon

Mustard White

6/18 50 New Lenox Rd, Lenox - Frank Model
7/17 16 C Berkshire NABA - Tom Tying
7/21 100 George L Darey WMA, Lenox - Tom Gagnon #

West Virginia White

4/8 1 Whately - Bill Benner
4/21 3 Sunderland - Ron+Sue Cloutier
5/1 6 Sunderland - Steve Moore+Barbara Volkle
5/15 2 New Marlborough - Mark Lynch+Sheila Carroll
5/20 7 Mount Greylock - Tom Gagnon+Bruce Ripley

Cabbage White

3/19 1 Hingham - Erik Nielsen
3/20 1 Belchertown - Jason Watson
3/20 1 Belmont - Fred Bouchard
3/27 1 Champagne yard, Foxborough - M. Champagne
3/27 1 Wellfleet Bay Ws, Wellfleet - Joe Lawler
4/21 16 Wellfleet Bay Ws, Wellfleet - Mark Faherty
5/1 24 W Bridgewater - Don Adams
6/18 50 World's End, Hingham - Bob Bowker
7/3 29 AF, Hamilton/Ipswich - Sharon Stichter#
7/21 20 George L Darey WMA, Lenox - Tom Gagnon #
8/1 60 World's End, Hingham - Bob Bowker
8/7 14 Tyringham - Mark Lynch+Sheila Carroll
8/21 450++ Cheshire-Savoy - Mark Lynch+Sheila Carroll
8/27 ~80000 Worthington - Barbara Spencer
9/19 40+ Northampton CG - MBC (Benner+Gagnon)
9/25 53 Sedge Meadow, Wayland - MBC (Erik Nielsen)
10/2 40 Wayland CG - Barbara Volkle #
10/9 12 Worthington - Barbara
10/17 12 Westport - Mark Lynch+Sheila Carroll
10/26 3 Beverly - Karen Haley
10/28 5 World's End, Hingham - Bob Bowker

10/30 1 AP Allens Neck, Dartmouth - Erik Nielsen
11/6 1 Northampton - Mark Lynch+Sheila Carroll

Clouded Sulphur

4/3 1 Barry Yard, Paxton - Elise Barry
4/4 3 MPRA, W Newbury - Bo Zarembo
4/11 1 Muddy Brook, Ware - Brian Klassanos
4/20 5+ Ward Res, Andover - Howard Hoople
4/22 12 Rocky Narrows, Sherborn - Bob Bowker
4/24 15 Westfield - Tom Gagnon#
4/24 24 Hampden - Erin Gillen
5/4 20 NCM, Petersham - Ron+Sue Cloutier
5/15 48 New Marlborough - Mark Lynch+Sheila Carroll
6/27 19 Graves Farm, Williamsburg - Bill Benner
6/30 17 Millenium Park, Roxbury - Bob Bowker
7/3 65 AF, Hamilton/Ipswich - Sharon Stichter#
7/3 38 MBWMA, Newbury - Joe Stichter #
7/6 42 Moore SP, Paxton - Elise Barry
8/7 74 Tyringham - Mark Lynch+Sheila Carroll
8/8 17 MCP, Burlington/Woburn - Sharon Stichter#
8/28 50+ Williamstown - Bo Zarembo
9/6 21 Muddy Brook, Ware - Brian Klassanos
9/11 45 AP, Dartmouth - Dolores Price+Wendy Miller
10/2 15 NAC, Concord - Barbara Volkle #
10/10 16 Brookfield - Mark Lynch+Sheila Carroll
10/11 4 MMP, Williamstown - Pam Weatherbee
10/11 15 Dauphinais Park, Grafton - Dolores Price
10/26 2 Beverly - Karen Haley
10/28 6 Millis - Madeline Champagne
10/30 75 AP Allens Neck, Dartmouth - Erik Nielsen

Orange Sulphur

4/24 1 Town Farm TTOR, Westport - Lauren Miller-Donnelly
4/24 1 Oak Bluffs - Matt Pelikan
5/2 1 MBWMA, Newbury - Sharon and Joe Stichter
5/13 1 World's End, Hingham - Bob Bowker
5/16 3 Delaney WMA, Stow - Steve Moore
5/23 2 Rowden Yard, Leicester - Mark Rowden
6/2 1 Muddy Brook, Ware - Brian Klassanos
6/18 1 Hinsdale - Frank Model
6/27 5 Wachusett WS, Princeton - S. Moore+B. Volkle
6/27 3 Graves Farm, Williamsburg - Bill Benner
7/6 6 Moore SP, Paxton - Elise Barry
7/25 6 Wendell - Carl Kamp#
7/31 4 Cape Cod Org. Farm, Barnstable - Alison Robb#
9/20 103 Delaney WMA, Stow - Steve Moore
10/9 150 AP, Dartmouth - Steve Moore+Barbara Volkle
10/10 5 Beverly - Karen Haley
10/11 65 Katama, Edgartown - Matt Pelikan
10/17 1 Leicester - Mark Rowden
10/28 3 World's End, Hingham - Bob Bowker
10/28 2 Millis - Madeline Champagne
10/30 28 AP Allens Neck, Dartmouth - Erik Nielsen
11/21 1 Acoaxet - Erik Nielsen

Cloudless Sulphur

7/6 2 W Soumi Field, Paxton - Elise Barry
9/6 2 Chilmark - Allan Keith
9/11 1 AP, Dartmouth - Dolores Price+Wendy Miller
9/19 1 W Bridgewater - Don Adams
9/23 1 Falmouth - Matt Pelikan
9/27 1 Penikese Island - Alison Robb
10/2 1 Pochet Island, Orleans - Wayne Petersen
10/19 1 Oak Bluffs - Matt Pelikan

Harvester

5/7 1 Barry Yard, Paxton - Elise Barry
5/17 1 Dunback Meadows, Lexington -

B.Bowker+F.Bouchard

5/21 1 Tom Swamp, Petersham - Bo Zarembo
6/14 2 S-C TTOR, N Andover - Russ Hopping
6/18 2 ML, Arlington/Medford - Renee LaFontaine
8/21 2 FS WMA, Longmeadow - Bo Zarembo
9/5 1 CST, Westborough - Steve Moore+Barbara Volkle

American Copper

4/4 1 MPRA, W Newbury - Bo Zarembo
4/14 1 Oak Bluffs - Matt Pelikan
4/19 1 AP Field Station, Dartmouth - Erik Nielsen
4/24 1 Ware River - Brian Klassanos
4/24 1 Hampden - Erin Gillen
4/25 4 Water Tower PL, NP - Sharon Stichter
5/1 6 Millenium Park, Roxbury - Bob Bowker
5/1 24 Westfield - Steve Moore+Barbara Volkle
5/5 30 Ward Res, Andover - Howard Hoople
5/13 43 World's End, Hingham - Bob Bowker
5/13 14 Florence - Tom Gagnon
7/3 46 GBH, Canton - MBC (S.Moore+B.Volkle)
7/3 33 MBWMA, Newbury - Joe Stichter #
7/8 200 Maudslay SP, NP - S. Stichter + Bo Zarembo
8/13 25+ Gooseberry Neck, Westport - M.Lynch+S.Carroll
10/10 20 Beverly - Karen Haley
10/11 18 AP, Dartmouth - Bob Bowker
10/11 1 MMP, Williamstown - Pam Weatherbee
10/17 9 Millenium Park, Roxbury - Bob Bowker
10/19 2 Oak Bluffs - Matt Pelikan
10/26 3 Beverly - Karen Haley
10/30 1 Stichter Yard, Newbury - Sharon Stichter

Bronze Copper

6/8 1 AF, Hamilton/Ipswich - Howard Hoople
7/2 3 Millenium Park, Roxbury - B. Bowker+L. Stillwell
9/6 1 Sedge Meadow, Wayland - Greg Dysart
9/15 7 Sedge Meadow, Wayland - Steve Moore #
9/25 6 Wayland CG - MBC (Erik Nielsen)
9/25 10 Sudbury CG - MBC (Erik Nielsen)
9/25 26 Sedge Meadow, Wayland - MBC (Erik Nielsen)
10/8 4 Sedge Meadow, Wayland - Greg Dysart
10/10 2 Wayland CG - Greg Dysart #

Bob Copper

6/25 10 Tully Dam, Royalston - Sue+Ron Cloutier
6/27 62 Tully Dam, Royalston - S. Moore+B. Volkle
7/8 25 Tully Dam, Royalston - MBC (Frank Model)

Coral Hairstreak

6/21 1 HPM, Woburn - Sue+Ron Cloutier
6/25 1 MCP, Burlington/Woburn - Sharon Stichter
6/25 1 Quabbin Park, Belchertown - Sue+Ron Cloutier
6/26 1 GBH, Canton - E.Nielsen+R.Hamburger
6/26 9 HPM, Woburn - MBC (Steve Moore)
7/3 1 MBWMA, Newbury - Joe Stichter #
7/3 5 GBH, Canton - MBC (S.Moore+B.Volkle)
7/9 1 Weir Hill Res, N Andover - Howard Hoople
7/11 1 MMP, Williamstown - Pam Weatherbee

Acadian Hairstreak

6/21 1 HPM, Woburn - Sue+Ron Cloutier
6/26 12 Pittsfield - Tom Gagnon+Harvey Allen
6/26 3 HPM, Woburn - MBC (Steve Moore)
6/27 1 HPM, Woburn - Erik Nielsen #

Edwards' Hairstreak

6/11 1 GBH, Canton - Sam Jaffe
6/18 1 BMB WS, Worcester - Steve Moore
6/22 5+ GBH, Canton - Sam Jaffe

6/25 1 Quabbin Park, Belchertown - Sue+Ron Cloutier
6/26 6 GBH, Canton - E.Nielsen+R.Hamburger
6/26 14 HPM, Woburn - MBC (Steve Moore)
7/1 1 MV SF - Matt Pelikan
7/3 3 GBH, Canton - MBC (S.Moore+B.Volkle)

Banded Hairstreak

6/11 1 GBH, Canton - Sam Jaffe
6/14 1 Hale Res, Westwood - Brian Cassie
6/15 2 Champagne yard, Foxborough - M. Champagne
6/18 1 MBWMA, Newbury - Sharon Stichter
6/18 1 World's End, Hingham - Bob Bowker
6/19 1 Sherborn - Bob Bowker+Lesley Stillwell
6/22 18+ GBH, Canton - Sam Jaffe
6/26 8 HPM, Woburn - MBC (Steve Moore)
6/26 12 GBH, Canton - E.Nielsen+R.Hamburger
7/2 1 Rowden Yard, Leicester - Mark Rowden
7/11 2 Rowden Yard, Leicester - Mark Rowden
7/19 1 Boxford - Russ Hopping

Hickory Hairstreak

6/18 1 World's End, Hingham - Bob Bowker

Striped Hairstreak

6/21 10+ HPM, Woburn - Sue+Ron Cloutier
6/22 1 GBH, Canton - Sam Jaffe
6/23 15 HPM, Woburn - Steve Moore+Barbara Volkle
6/26 1 Water Tower Field, NP - Bo Zarembo
6/27 1 Wachusett WS, Princeton - S. Moore+B. Volkle
7/3 1 The Ordway Property, W Newbury - Erik Nielsen
7/3 1 Maudslay SP, NP - Bo Zarembo
7/4 1 E Longmeadow - Karen Parker
7/5 2 Rowden Yard, Leicester - Mark Rowden

Oak Hairstreak

6/11 2 GBH, Canton - Sam Jaffe
6/15 2 GBH, Canton - Steve Moore #
6/26 1 GBH, Canton - E.Nielsen+R.Hamburger

Brown Elfin

4/4 1 GBH, Canton - Sam Jaffe
4/5 1 Sherborn PL - Bob Bowker
4/5 1 W Tisbury SF - Judy Holland
4/12 15 Sherborn PL - Bob Bowker
4/14 15 MSSF, Plymouth - Steve Moore+Tom Prince
4/21 52 Wellfleet Bay Ws, Wellfleet - Mark Faherty
4/21 15 Montague - Ron+Sue Cloutier
4/24 32 MSSF, Plymouth - Erik Nielsen
5/1 1 Lamson Rd, Foxborough - Madeline Champagne
5/1 6 Westfield - Steve Moore+Barbara Volkle
5/10 3 Chickatawbut Hill, Milton - Sam Jaffe
5/15 1 Weir Hill Res, N Andover - MBC
(H. Hoopler+R. Hopping)
6/6 2 Crane WMA, Falmouth - Alison Robb

Hoary Elfin

4/12 1 Long Point, W Tisbury - Russ Hopping
4/14 1 MSSF, Plymouth - Bo Zarembo
4/21 3 W Tisbury SF - Matt Pelikan
4/22 5 Wellfleet Bay Ws, Wellfleet - Mark Faherty
4/24 1 MV SF - Matt Pelikan
4/24 13 MSSF, Plymouth - Erik Nielsen
5/23 9 MSSF, Plymouth - MBC (E.Nielsen)

Frosted Elfin

4/8 1 Weir Hill Res, N Andover - H.Hoopler+R.Hopping
4/14 28 Westfield - Tom Gagnon
4/21 2 HPM, Woburn - Howard Hoopler+Steve Moore
4/21 1 Montague - Ron+Sue Cloutier
4/24 3 MSSF, Plymouth - Bo Zarembo

4/24 35 Westfield - Tom Gagnon#
5/1 15 Acton - Tom Whelan
5/5 14 Lamson Rd, Foxborough - Madeline Champagne
5/23 5 MSSF, Plymouth - MBC (E.Nielsen)
5/24 39 Lamson Rd, Foxborough - Madeline Champagne
5/31 8 Crane WMA, Falmouth - Alison Robb
6/3 2 Sherborn PL - Bob Bowker
6/4 11 Lamson Rd, Foxborough - Madeline Champagne

Henry's Elfin

4/4 1 Plum Island - Erik Nielsen
4/11 2 Acton - Erik Nielsen
4/12 1 Sherborn PL - Bob Bowker
4/21 5 Great Meadow, Arlington - Tom Whelan
4/24 2 Juniper Hill, Lexington - Mark Rainey
4/30 1 Fowl Meadows, Milton - Sam Jaffe
5/2 1 Oxbow NWR, Harvard - S. Moore+B. Volkle
5/21 2 Crane WMA, Falmouth - Alison Robb
5/22 4 Tom Swamp, Petersham - T. Gagnon+B. Ripley
5/23 1 Tom Swamp, Petersham - MBC (Tom Gagnon)

Eastern Pine Elfin

4/5 1 Sherborn PL - Bob Bowker
4/11 1 GBH, Canton - Sam Jaffe
4/13 1 Florence - Tom Gagnon
4/14 1 Ward Res, Andover - Howard Hoopler
4/14 1 MSSF, Plymouth - Steve Moore+Tom Prince
4/24 3 MV SF - Matt Pelikan
4/24 4 MSSF, Plymouth - Bo Zarembo
4/24 6 Westfield - Tom Gagnon#
5/1 2 Acton - Tom Whelan
5/2 13 S Quabbin - Mark Lynch+Sheila Carroll
5/2 4 Dauphinais Park, Grafton - Dolores Price
5/23 3 Tom Swamp, Petersham - MBC (Tom Gagnon)
5/25 1 Brentwood CA, Holliston - Bob Bowker
5/28 1 E Longmeadow - Karen Parker
5/30 1 Whately - Bill Benner
5/30 1 Muddy Brook, Ware - Brian Klassanos

Juniper Hairstreak

4/21 1 HPM, Woburn - Howard Hoopler+Steve Moore
4/24 1 Oak Bluffs - Matt Pelikan
4/24 2 HPM, Woburn - Howard Hoopler
5/2 1 Northampton - Joshua Rose
5/5 3 Juniper Hill, Lexington - Tom Whelan
5/20 1 Juniper Hill, Lexington - Steve Moore

White M Hairstreak

4/23 1 Palmer - Chris Buelow
5/7 1 W Tisbury SF - Matt Pelikan
6/26 1 MHF, Sharon - Madeline Champagne
9/11 1 AP Allens Neck, Dartmouth - D.Price+W.Miller
9/14 1 Gooseberry Neck, Westport - M. Champagne
9/19 1 Montserrat, Beverly - Karen Haley
9/21 1 Montserrat, Beverly - Karen Haley
9/21 1 Chilmark - Matt Pelikan

Gray Hairstreak

4/8 1 Weir Hill Res, N Andover - H.Hoopler+R.Hopping
4/11 1 GBH, Canton - Sam Jaffe
4/21 1 Wellfleet Bay Ws, Wellfleet - Mark Faherty
5/1 1 Acton - Tom Whelan
5/11 3 Weir Hill Res, N Andover - S.Stichter + H.Hoopler
7/3 12 GBH, Canton - MBC (S.Moore+B.Volkle)
9/11 6 AP, Dartmouth - Dolores Price+Wendy Miller
9/18 2 HPM, Woburn - Howard Hoopler
10/1 1 Vineyard Haven - Matt Pelikan
10/11 2 NP - Bo Zarembo
10/17 1 Millennium Park, Roxbury - Bob Bowker

10/26 1 Beverly - Karen Haley

Early Hairstreak

5/30 3 Mount Greylock - Tom Gagnon#

Eastern Tailed-Blue

4/15 1 Weir Hill Res, N Andover - Howard Hoople
5/7 14 Caratunk WR, Seekonk - Michael Kieron
4/21 6 HPM, Woburn - Howard Hoople+Steve Moore
4/21 6 W Tisbury SF - Matt Pelikan
5/1 20+ HPM, Woburn - Mark Rainey
5/7 14 Caratunk WR, Seekonk - Michael Kieron
5/16 6 MHF, Sharon - Madeline Champagne
6/27 8 Muddy Brook, Ware - Brian Klassanos
7/17 10 Leicester - Dolores Price#
7/25 20+ Wendell - Carl Kamp#
9/6 15 Crane WMA, Falmouth - Alison Robb
9/12 21 MSSF, Plymouth - Bo Zaremba
9/18 18 HPM, Woburn - Howard Hoople
9/21 6 Chilmark - Matt Pelikan
9/24 11 Chelmsford PL - Bob Bowker
10/2 1 Wayland CG - Mark Rainey
10/8 2 World's End, Hingham - Bob Bowker
10/11 2 Dauphinais Park, Grafton - Dolores Price
10/11 2 SF, Edgartown - Matt Pelikan
10/11 3 AP, Dartmouth - Bob Bowker

Spring Azure

3/20 1 E Longmeadow - Karen Parker
3/20 1 Muddy Brook, Ware - Brian Klassanos
4/1 2 AP, Dartmouth - Lauren Miller-Donnelly
4/1 1 S Amherst - Harvey Allen
4/1 9 Sherborn PL - Bob Bowker
4/2 7 Boxford - Russ Hopping
4/3 68 Noanet Woodlands Res., Dover - Erik Nielsen
4/4 21 Lamson Rd, Foxborough - Madeline Champagne
4/5 13 Hofl Farm, W Tisbury - Matt Pelikan
4/8 37 Sherborn PL - Bob Bowker
4/14 851 MSSF, Plymouth - Steve Moore+Tom Prince
4/24 250+ MSSF, Plymouth - Bo Zaremba
4/24 45 MV SF - Matt Pelikan
5/1 40 Ware River Watershed, Barre -
M.Lynch+S.Carroll
5/2 54 S Quabbin - Mark Lynch+Sheila Carroll
5/7 45 W Tisbury SF - Matt Pelikan
5/15 13 New Marlborough - Mark Lynch+Sheila Carroll
5/21 2 Crane WMA, Falmouth - Alison Robb
5/25 3 AP, Dartmouth - Lauren Miller-Donnelly
5/27 8 Wellfleet Bay Ws, Wellfleet - Mark Faherty
5/30 1 Royalston - Carl Kamp
5/30 2 Rowden Yard, Leicester - Mark Rowden

Cherry Gall Azure

5/2 1 Juniper Hill, Lexington - Mark Rainey
5/7 2 Barry Yard, Paxton - Elise Barry
5/10 8 Sherborn PL - Bob Bowker
5/15 ~20 Woods Preserve, W Tisbury - Matt Pelikan
5/17 16 Dunback Meadows, Lexington -
B.Bowker+F.Bouchard
5/21 1 CST, Westborough - Steve Moore+Barbara Volk
5/23 1 MSSF, Plymouth - MBC (E.Nielsen)
5/25 3 Tom Swamp, Petersham - Frank Model
5/25 9 Brentwood CA, Holliston - Bob Bowker
6/7 1 Weir Hill Res, N Andover - Howard Hoople

Summer Azure

5/26 1 S-C TTOR, N Andover - Russ Hopping
5/30 1 Boxford - Russ Hopping
6/15 2 GBH, Canton - Steve Moore #
6/15 1 Barry Yard, Paxton - Elise Barry

6/20 1 Muddy Brook, Ware - Brian Klassanos
6/23 3 CST, N/W.borough - Steve Moore#
6/26 4 GBH, Canton - E.Nielsen+R.Hamburg
6/29 1 Graves Farm, Williamsburg - Tom Gagnon#
6/30 3 Moore SP, Paxton - Elise Barry
7/3 9 Old Town Hill, Newbury - Erik Nielsen
7/6 7 Moore SP, Paxton - Elise Barry
7/11 3 MMP, Williamstown - Pam Weatherbee
7/21 3 October Mountain SF - Tom Gagnon #
9/11 1 AP, Dartmouth - Dolores Price+Wendy Miller
9/16 2 Mount Tom State Res. - Tom Gagnon
9/19 1 Whately - Bill Benner

Azure Sp.

4/20 5 Ward Res, Andover - Howard Hoople
4/30 10 Lamson Rd, Foxborough - Madeline Champagne
5/1 21 Acton - Tom Whelan

Silvery Blue

4/15 1 Westfield - Erin Gillen
5/1 1 Muddy Brook, Ware - Brian Klassanos
5/14 2 South End Pond, Millis - Brian Cassie
5/15 40 Delaney WMA, Stow - MBC (Tom Murray)
5/17 4 Cherry Hill Res, W Newbury - S. and J. Stichter
5/28 1 Windsor - Bo Zaremba
5/30 2 Cherry Hill Res, W Newbury - Erik Nielsen
5/31 1 Muddy Brook, Ware - Brian Klassanos
6/4 6+ New Lenox Rd, Lenox - Tom Fiore

American Snout

5/20 1 Windsor - Tom Gagnon
9/6 1 Gay Head - Matt Pelikan

Variiegated Fritillary

6/18 1 Chatham - Mark Faherty
7/10 1 Muddy Brook, Ware - Brian Klassanos
7/17 1 Brewster NABA - Alison Robb
8/31 1 Northampton CG - Madeline Champagne
9/3 1 Northampton CG - Bill Benner
10/9 1 AP, Dartmouth - Lauren Miller-Donnelly

Great Spangled Fritillary

6/1 1 Muddy Brook, Ware - Brian Klassanos
6/5 1 Broadmoor WS, Natick - Greg Dysart
6/8 1 Athol - Dave Small
6/9 5 MBWMA, Newbury - Sharon and Joe Stichter
6/10 1 MCRT - Mushopauge, Rutland - Elise Barry
6/15 2 F&G Fields, Westborough - Steve Moore
6/18 1 World's End, Hingham - Bob Bowker
6/18 1 Old Manse TTOR, Concord - Russ Hopping
6/19 1 Gill - Carl Kamp
6/20 25 Muddy Brook, Ware - Brian Klassanos
6/25 3 MCP, Burlington/Woburn - Sharon Stichter
6/26 12 MHF, Sharon - Madeline Champagne
6/27 30 Graves Farm, Williamsburg - Bill Benner
7/5 23 MHF, Sharon - Erik Nielsen
7/6 11 Moore SP, Paxton - Elise Barry
7/11 5 MMP, Williamstown - Pam Weatherbee
7/11 25 New Marlborough - Mark Lynch+Sheila Carroll
7/17 3 Leicester - Dolores Price#
7/31 8 Monterey - Mark Lynch+Sheila Carroll
8/21 19 Cheshire-Savoy - Mark Lynch+Sheila Carroll
9/19 5 Northampton CG - MBC (Benner+Gagnon)
9/25 2 E Longmeadow - Karen Parker
10/3 2 Muddy Brook, Ware - Brian Klassanos

Aphrodite Fritillary

7/4 1 Muddy Brook, Ware - Brian Klassanos
7/6 1 W Soumi Field, Paxton - Elise Barry

7/8 2 Tully Dam, Royalston - MBC (Frank Model)
 7/8 8 Holden - Carl Kamp
 7/11 2 Graves Farm, Williamsburg - MBC (Bill Benner)
 7/11 1 New Marlborough - Mark Lynch+Sheila Carroll
 7/15 1 DCR Sterling Rd, Holden - Elise Barry
 7/21 1 October Mountain SF - Tom Gagnon #
 7/28 1 Haley Yard, Marblehead - Karen Haley
 8/14 1 Muddy Brook, Ware - Brian Klassanos
 8/28 1 Williamstown - Bo Zaremba

Atlantis Fritillary

6/18 2 West Cummington - Barbara Spencer
 7/11 1 New Marlborough - Mark Lynch+Sheila Carroll
 7/16 5 Mount Greylock - Tom Gagnon
 7/21 6 October Mountain SF - Tom Gagnon #
 7/31 1 Monterey - Mark Lynch+Sheila Carroll

Silver-bordered Fritillary

5/16 1 Muddy Brook, Ware - Brian Klassanos
 5/17 1 Mount Tom State Res. - Carl Kamp
 5/23 6 Tully Dam, Athol/Royalston - C. Kamp+A. Mayo
 5/26 6 Umass Campus, Amherst - Frank Model
 5/28 1 Windsor - Bo Zaremba
 5/30 1 Whately - Bill Benner
 6/27 3 Tully Dam, Royalston - S. Moore+B. Volke
 7/3 14 Muddy Brook, Ware - Brian Klassanos
 7/24 4 Westport - Brian Cassie
 7/25 10 Wendell - Carl Kamp#
 9/6 16 Muddy Brook, Ware - Brian Klassanos
 9/11 2 Topsfield - Sharon Stichter
 9/11 5 AF, Hamilton/Ipswich - Russ Hopping et al
 9/22 1 Savoy - Tom Gagnon

Meadow Fritillary

5/25 1 E Longmeadow - Karen Parker
 5/28 1 Williamstown - Bo Zaremba
 6/16 1 Savoy - Barbara Spencer
 6/29 3 Graves Farm, Williamsburg - Tom Gagnon#
 7/11 2 New Marlborough - Mark Lynch+Sheila Carroll
 8/2 1 Royalston - Carl Kamp
 8/7 3 Tyringham - Mark Lynch+Sheila Carroll
 8/28 2 Williamstown - Bo Zaremba
 10/11 1 Williamstown - Pam Weatherbee

Harris' Checkerspot

5/25 2 Weir Hill Res, N Andover - Howard Hoople
 6/5 3 Royalston - Carl Kamp+Alyce Mayo
 6/8 6 NCM, Petersham - Bo Zaremba
 6/18 1 MBWMA, Newbury - Sharon Stichter
 6/19 1 Royalston - Carl Kamp
 7/4 3 Weir Hill Res, N Andover - Howard Hoople

Pearl Crescent

5/1 1 Muddy Brook, Ware - Brian Klassanos
 5/1 1 So.Main St.PL, Millbury - W. Miller+D. Price
 5/1 2 Dauphinais Park, Grafton - W. Miller+D. Price
 5/3 3 Rte2&128 Office Park, Lexington - Tom Whelan
 5/5 1 Quabbin Park, Belchertown - Ron+Sue Cloutier
 5/6 16 W Bridgewater - Don Adams
 5/11 27 Baseball Field, Rowley - Bo Zaremba
 5/13 75 World's End, Hingham - Bob Bowker
 5/15 12 Delaney WMA, Stow - MBC (Tom Murray)
 5/16 35 Muddy Brook, Ware - Brian Klassanos
 5/17 200 Cherry Hill Res, W Newbury - S. and J. Stichter
 5/21 50+ Crane WMA, Falmouth - Alison Robb
 6/4 -200 Nat's Farm, W Tisbury - Matt Pelikan
 7/8 200 Maudslay SP, NP - S. Stichter + Bo Zaremba
 7/11 20+ MMP, Williamstown - Pam Weatherbee
 7/15 200 Fruitlands, Harvard - Sharon Stichter

7/17 274 Leicester - Dolores Price#
 7/18 250-300 Muddy Brook, Ware - Brian Klassanos
 7/31 135+ Monterey - Mark Lynch+Sheila Carroll
 8/1 110 World's End, Hingham - Bob Bowker
 8/28 50+ Williamstown - Bo Zaremba
 9/6 51 Muddy Brook, Ware - Brian Klassanos
 9/14 80 Waring Field, Rockport - S.Stichter and H.Hoople
 10/11 1 Williamstown - Pam Weatherbee
 10/11 2 NP - Bo Zaremba
 10/11 2 Dauphinais Park, Grafton - Dolores Price
 10/18 1 MCP, Burlington/Woburn - Bob Bowker

Baltimore Checkerspot

6/5 10 W Bridgewater - Don Adams
 6/11 200 Marston Mills Airport - Tor Hansen
 6/14 14 S-C TTOR, N Andover - Russ Hopping
 6/18 26 World's End, Hingham - Bob Bowker
 6/19 50-60 W Bridgewater - Don Adams
 6/26 17 Weir Hill Res, N Andover - Howard Hoople
 6/28 20 AP Field Station, Dartmouth - L. Miller-Donnelly
 7/3 6 AF, Hamilton/Ipswich - Sharon Stichter#
 7/3 12 MPRA, W Newbury - Erik Nielsen
 7/3 1 Maudslay SP, NP - Bo Zaremba
 7/4 10 Weir Hill Res, N Andover - Howard Hoople
 7/11 1 Muddy Brook, Ware - Brian Klassanos
 7/11 2 MMP, Williamstown - Pam Weatherbee
 7/21 1 George L Darcy WMA, Lenox - Tom Gagnon #

Question Mark

3/20 1 Oak Hill Cem., NP - Bo Zaremba
 3/20 1 Sheffield - Mark Lynch+Sheila Carroll
 4/19 1 AP Allens Neck, Dartmouth - Erik Nielsen
 4/20 2 Pilgrim Heights, Truro - Don Manchester
 5/13 1 World's End, Hingham - Bob Bowker
 6/25 1 Quabbin Park, Belchertown - Sue+Ron Cloutier
 6/27 2 Muddy Brook, Ware - Brian Klassanos
 7/5 2 E Longmeadow - Karen Parker
 8/21 1 FS WMA, Longmeadow - Bo Zaremba
 9/22 1 Windsor - Tom Gagnon
 10/8 1 Hyde Park - fide Mark Faherty
 10/9 1 AP, Dartmouth - Steve Moore+Barbara Volke
 10/11 1 Katama, Edgartown - Matt Pelikan

Eastern Comma

3/8 2 Ward Res, Andover - Howard Hoople
 3/16 7 Mount Tom State Res. - Tom Gagnon #
 3/17 1 CST, N/W.borough - Steve Moore
 3/17 1 BMB WS, Worcester - Martha Gach
 3/19 10 Bradley Palmer SP, Hamilton - Jim Berry
 3/20 15 Broadmoor WS, Natick - Bob Bowker
 4/4 2 Mumford Forest, Natick - Greg Dysart
 4/8 2 Muddy Brook, Ware - Brian Klassanos
 7/24 1 Hyde Park - Paula Chasan
 8/7 3 E Longmeadow - Karen Parker
 9/17 3 Larkin RA, Northbridge - Bob Bowker
 10/9 1 Tyringham - Mark Lynch+Sheila Carroll
 10/11 1 Grafton - Dolores Price
 10/26 1 Rowden Yard, Leicester - Mark Rowden
 10/28 1 World's End, Hingham - Bob Bowker
 11/13 1 Amherst - Joshua Rose
 11/13 1 Wrentham - Madeline Champagne

Green Comma

9/22 1 Windsor - Tom Gagnon

Gray Comma

8/28 1 Williamstown - Bo Zaremba

Compton Tortoiseshell

- 3/20 5 Mumford Forest, Natick - Bob Bowker
- 4/2 1 Boxford - Russ Hopping
- 4/4 1 Mumford Forest, Natick - Greg Dysart
- 4/11 1 Boxford - Russ Hopping
- 6/4 5 Mount Greylock - Tom Fiore
- 6/22 1 GBH, Canton - Sam Jaffe

Mourning Cloak

- 3/9 1 Winchendon - Keith Parker
- 3/16 2 Ward Res, Andover - Howard Hoople
- 3/16 9 Mount Tom State Res. - Tom Gagnon #
- 3/16 1 Muddy Brook, Ware - Brian Klassanos
- 3/20 1 Ellisville Harbor SP, Plymouth - Mark Faherty
- 3/20 8 Mumford Forest, Natick - Bob Bowker
- 4/3 15 Mount Tom State Res. - MBC (Tom Gagnon)
- 4/5 2 Paloma Park, Holliston - Bob Bowker
- 4/11 1 Ravenswoods Park, Gloucester - Susan Hedman
- 4/21 2 Great Meadow, Arlington - Tom Whelan
- 5/4 2 Roberts Rd., Sandisfield - Mark Rowden
- 9/19 1 E Longmeadow - Karen Parker
- 9/21 2 Chilmark - Matt Pelikan
- 10/11 1 Katama, Edgartown - Matt Pelikan
- 10/17 1 Westport - Mark Lynch+Sheila Carroll
- 11/13 1 Royalston - Carl Kamp

Milbert's Tortoiseshell

- 4/8 1 Williamstown - Pam Weatherbee
- 5/30 4 Whately - Bill Benner
- 5/30 2 Muddy Brook, Ware - Brian Klassanos
- 6/4 5 Muddy Brook, Ware - Brian Klassanos
- 7/7 1 Fairgrounds, Cummington - Barbara Spencer
- 7/11 1 Whately - Bill Benner
- 7/15 1 Rowden Yard, Leicester - Mark Rowden
- 10/13 1 Shelburne Falls - Jeff Boettner

American Lady

- 4/8 1 W Tisbury SF - Matt Pelikan
- 4/10 1 Manchester - Susan Hedman
- 4/14 1 Chatham - Mark Faherty
- 5/2 1 Montague - Joshua Rose
- 5/2 3 Lamson Rd, Foxborough - M.Champagne+B.Cassie
- 5/2 1 Muddy Brook, Ware - Brian Klassanos
- 5/5 2 Comm.Gardens, Falmouth - Alison Robb
- 5/13 11 Tisbury - Matt Pelikan
- 5/20 4 Mount Greylock - Tom Gagnon+Bruce Ripley
- 5/21 15 HPM, Woburn - Bob Bowker
- 6/30 1 Mt A, Cambridge - George McLean
- 7/11 1 New Marlborough - Mark Lynch+Sheila Carroll
- 7/16 6 Mount Greylock - Tom Gagnon
- 9/3 2 Northampton CG - Bill Benner
- 9/4 12 Sylvan Nursery, Westport - Madeline Champagne
- 9/15 8 Milford PL - Bob Bowker
- 10/8 42 World's End, Hingham - Bob Bowker
- 10/9 2 Harwich - Larry Barry
- 10/10 1 Rowden Yard, Leicester - Mark Rowden
- 10/11 24 AP, Dartmouth - Bob Bowker
- 10/28 7 World's End, Hingham - Bob Bowker
- 10/30 1 AP Allens Neck, Dartmouth - Erik Nielsen
- 11/13 1 BMB WS, Worcester - Howard Hoople

Painted Lady

- 5/9 2 W Bridgewater - Don Adams
- 5/10 1 Chickatawbut Hill, Milton - Sam Jaffe
- 5/13 2 World's End, Hingham - Bob Bowker
- 5/16 1 Katama, Edgartown - Matt Pelikan
- 5/20 2 W Bridgewater - Don Adams
- 5/21 1 BMB WS, Worcester - Dolores Price

- 6/25 1 HPM, Woburn - Sharon Stichter
- 8/26 1 Barry Yard, Paxton - Elise Barry
- 8/27 4 Wayland CG - Steve Moore+Barbara Volke
- 10/10 2 Beverly - Karen Haley
- 10/12 1 NP - Bo Zaremba
- 10/28 5 World's End, Hingham - Bob Bowker
- 10/30 2 AP Allens Neck, Dartmouth - Erik Nielsen
- 11/12 1 Nahant - Linda Pivacek

Red Admiral

- 5/2 1 Muddy Brook, Ware - Brian Klassanos
- 5/2 1 Stichter Yard, Newbury - Sharon and Joe Stichter
- 5/2 1 MSSF, Plymouth - Bo Zaremba
- 5/2 1 Dauphinais Park, Grafton - Dolores Price
- 5/2 1 AP, Dartmouth - Lauren Miller-Donnelly
- 5/10 15+ Chickatawbut Hill, Milton - Sam Jaffe
- 5/15 17 Quabbin Park, Belchertown - Greg Dysart
- 5/15 21 New Marlborough - Mark Lynch+Sheila Carroll
- 5/16 105+ Buck Hill, Spencer - Dolores Price
- 5/16 26 Stichter Yard, Newbury - Sharon Stichter
- 5/17 35 Dunback Meadows, Lexington - B. Bowker+F. Bouchard
- 5/20 12 Sherborn - Madeline Champagne
- 5/20 60 Park School, Brookline - Brian Cassie
- 5/20 16 Muddy Brook, Ware - Brian Klassanos
- 5/20 13 Mount Greylock - Tom Gagnon+Bruce Ripley
- 5/21 23 BMB WS, Worcester - Dolores Price
- 6/25 200 Katama, Edgartown - Matt Pelikan
- 10/8 54 World's End, Hingham - Bob Bowker
- 10/9 50+ AP, Dartmouth - Steve Moore+Barbara Volke
- 10/11 22 AP, Dartmouth - Bob Bowker
- 10/18 1 Woods Hole - Alison Robb
- 10/30 1 AP Allens Neck, Dartmouth - Erik Nielsen
- 10/31 1 Nahant - Linda Pivacek

Common Buckeye

- 5/13 1 Lamson Rd, Foxborough - Madeline Champagne
- 6/27 1 Roslindale, Boston - Paula Chasan
- 6/27 2 Muddy Brook, Ware - Brian Klassanos
- 7/11 1 Graves Farm, Williamsburg - MBC (Bill Benner)
- 7/19 1 Stichter Yard, Newbury - Joe Stichter
- 7/23 1 Cummington - Barbara Spencer
- 7/31 1 Cape Cod Organic Farm, Barnstable - A. Robb#
- 8/26 1 Gloucester - Susan Hedman
- 9/18 9 AP, Dartmouth - MBC (Lauren Miller-Donnelly)
- 10/10 1 Wayland CG - Greg Dysart #
- 10/11 11 Katama, Edgartown - Matt Pelikan
- 10/28 1 Millis - Madeline Champagne

White Admiral

- 5/24 1 Sunderland - Carl Kamp
- 5/28 1 Skinner SP, Holyoke - Greg Dysart
- 5/29 1 Boxford - Russ Hopping
- 6/16 9 Savoy - Barbara Spencer
- 7/21 1 October Mountain SF - Tom Gagnon #
- 7/31 2 Monterey - Mark Lynch+Sheila Carroll
- 8/7 1 Cummington - Barbara Spencer
- 8/8 1 W Bridgewater - Don Adams
- 8/8 1 E Longmeadow - Karen Parker
- 8/21 4 Cheshire-Savoy - Mark Lynch+Sheila Carroll
- 8/28 1 Williamstown - Bo Zaremba

Red-spotted Purple

- 5/17 1 Mount Tom State Res. - Carl Kamp
- 5/18 1 MPRA, W Newbury - Bo Zaremba
- 5/20 1 Lamson Rd, Foxborough - Madeline Champagne
- 5/21 2 CST, Westborough - Steve Moore+Barbara Volke
- 5/25 7 MBWMA, Newbury - Joe Stichter
- 5/26 2 Muddy Brook, Ware - Brian Klassanos

5/30 3 Cherry Hill Res, W Newbury - Erik Nielsen
 5/30 4 Muddy Brook, Ware - Brian Klassanos
 5/30 6 MBWMA, Newbury - Sharon and Joe Stichter
 6/2 2 Hatchville Woods, Falmouth - Alison Robb
 6/16 12 Savoy - Barbara Spencer
 7/21 8 October Mountain SF - Tom Gagnon #
 7/21 1 George L Darey WMA, Lenox - Tom Gagnon #
 7/26 1 Harwich - Larry Barry
 7/31 16 Monterey - Mark Lynch+Sheila Carroll
 8/8 1 Whately - Bill Benner
 8/28 1 Stichter Yard, Newbury - Sharon Stichter
 9/6 2 E Bridgewater - Eddie Giles
 9/10 1 Sylvan Nursery, Westport - Madeline Champagne
 9/11 1 AP, Dartmouth - Dolores Price+Wendy Miller

Viceroy

5/16 1 Sherborn PL - Bob Bowker
 5/20 1 MCP, Burlington/Woburn - Bob Bowker
 5/21 1 CST, Northborough - Steve Moore+Barbara Volke
 5/21 2 Muddy Brook, Ware - Brian Klassanos
 5/22 2 W Bridgewater - Don Adams
 5/30 12 Muddy Brook, Ware - Brian Klassanos
 6/12 5 Rehoboth - MBC (Lauren Miller-Donnelly)
 7/11 1 MMP, Williamstown - Pam Weatherbee
 7/11 2 Graves Farm, Williamsburg - MBC (Bill Benner)
 7/17 4 Leicester - Dolores Price#
 7/27 9 MBWMA, Newbury - Joe Stichter
 8/26 7 MBWMA, Newbury - Joe Stichter
 9/6 8 Muddy Brook, Ware - Brian Klassanos
 9/15 5 Milford PL - Bob Bowker
 9/19 1 W Meadows, Northampton - MBC
 (B. Benner+ T. Gagnon)
 9/19 1 Northampton CG - MBC (Benner+Gagnon)
 10/2 1 Wayland CG - Bo Zaremba
 10/2 1 Dartmouth/Westport - Bob Bowker+Ron
 Hamburger

Hackberry Emperor

7/25 1 Longmeadow - Bob Tynan
 8/9 1 Forest Park, Springfield - Tom Gagnon#
 8/21 2 Forest Park, Springfield - Bo Zaremba

Tawny Emperor

7/9 1 Bart's Cobble, Sheffield - Tom Gagnon+Bill Benner
 7/15 3 Mount Holyoke SP, Holyoke - Tom Gagnon #
 7/26 1 Springfield - Bob Bowker+Bob Tynan

Northern Pearly-Eye

6/22 1 Wales - Carl Kamp
 6/25 3 Quabbin Park, Belchertown - Sue+Ron Cloutier
 6/29 1 Fuitlands, Harvard - Sharon Stichter
 6/29 1 Barry Yard, Paxton - Elise Barry
 7/1 1 Champagne yard, Foxborough - Madeline
 Champagne
 7/2 1 Ward Res, Andover - Howard Hoople
 7/4 4 Muddy Brook, Ware - Brian Klassanos
 7/11 1 New Marlborough - Mark Lynch+Sheila Carroll
 7/11 1 Whately - Bill Benner
 7/15 1 DCR Sterling Rd, Holden - Elise Barry
 7/18 1 CST, Marlborough - MBC (S.Moore+B.Volke)

Eyed Brown

6/5 2 CST, Northborough - Steve Moore+Barbara Volke
 6/8 2 Sherborn PL - Bob Bowker
 6/15 1 Weir Hill Res, N Andover - Howard Hoople
 6/18 1 MBWMA, Newbury - Sharon Stichter
 6/18 1 Hinsdale - Frank Model
 6/19 3 Gill - Carl Kamp
 7/4 10 Weir Hill Res, N Andover - Howard Hoople

7/8 5 Branch Bridge, New Salem - MBC (Frank Model)
 7/17 1 CST, Northborough - Steve Moore+Barbara Volke
 8/2 4 Royalston - Carl Kamp

Appalachian Brown

6/11 7 Sherborn PL - Bob Bowker
 6/15 1 Weir Hill Res, N Andover - Howard Hoople
 6/23 3 CST, N/W.borough - Steve Moore#
 7/3 8 Maudslay SP, NP - Bo Zaremba
 7/4 1 Muddy Brook, Ware - Brian Klassanos
 7/5 6 Sherborn Gas Line - Bob Bowker
 7/16 1 Mount Greylock - Tom Gagnon
 8/21 13 FS WMA, Longmeadow - Bo Zaremba
 9/5 2 CST, Westborough - Steve Moore+Barbara Volke
 9/11 1 Quabbin Park, Belchertown - Joshua Rose
 9/15 1 AF, Hamilton/Ipswich - Russ Hopping

Little Wood-Satyr

5/13 4 World's End, Hingham - Bob Bowker
 5/15 3 S-C TTOR, N Andover - Howard Hoople #
 5/16 2 MHF, Sharon - Madeline Champagne
 5/17 1 W Bridgewater - Don Adams
 5/17 3 Lamson Rd, Foxborough - Madeline Champagne
 5/20 20 MCP, Burlington/Woburn - Bob Bowker
 5/24 85 Lamson Rd, Foxborough - Madeline Champagne
 5/27 400 MCP, Burlington/Woburn - Sharon+Joe Stichter
 6/4 40 Nat's Farm, W Tisbury - Matt Pelikan
 6/26 20+ Water Tower Field, NP - Bo Zaremba
 6/27 21 Graves Farm, Williamsburg - Bill Benner
 6/30 9 Muddy Brook, Ware - Brian Klassanos
 7/5 17 E Longmeadow - Karen Parker
 7/11 4 Graves Farm, Williamsburg - MBC (Bill Benner)
 7/17 3 Carney Res., Northborough - S.Moore+B.Volke
 7/18 1 CST, Northborough/Westborough - MBC
 7/25 1 E Longmeadow - Karen Parker
 7/31 1 Rowden Yard, Leicester - Mark Rowden

Common Ringlet

4/4 1 MPRA, W Newbury - Bo Zaremba
 5/5 1 Ward Res, Andover - Howard Hoople
 5/13 85 World's End, Hingham - Bob Bowker
 5/13 1 Tisbury - Matt Pelikan
 5/13 1 Florence - Tom Gagnon
 5/14 200+ South End Pond, Millis - Brian Cassie
 5/16 45 Carney Res., Northborough - S.Moore+B.Volke
 5/21 100+ Pump House, Athol - Bo Zaremba
 5/23 1 MSSF, Plymouth - MBC (E.Nielsen)
 5/25 200+ Maudslay SP, NP - Bo Zaremba
 5/30 150 Muddy Brook, Ware - Brian Klassanos
 5/31 36 Crane WMA, Falmouth - Alison Robb
 5/31 41 Sprague St., Foxborough - Madeline Champagne
 5/31 100 Muddy Brook, Ware - Brian Klassanos
 6/5 50+ Royalston - Carl Kamp+Alyce Mayo
 7/20 40 Adams Farm, Walpole - Madeline Champagne
 7/31 68 Marston Mills Airport - Alison Robb#
 8/1 95 World's End, Hingham - Bob Bowker
 8/14 25 Muddy Brook, Ware - Brian Klassanos
 9/24 5 Chelmsford PL - Bob Bowker
 9/25 1 Sedge Meadow, Wayland - MBC (Erik Nielsen)
 10/2 1 Weir Hill Res, N Andover - Howard Hoople
 10/8 1 Muddy Brook, Ware - Brian Klassanos
 10/11 1 Dauphinais Park, Grafton - Dolores Price

Common Wood-Nymph

6/22 1 HPM, Woburn - Bo Zaremba
 6/26 2 MHF, Sharon - Madeline Champagne
 6/26 3 Pittsfield - Tom Gagnon+Harvey Allen
 6/26 1 Water Tower Field, NP - Bo Zaremba
 6/29 3 Sherborn PL - Bob Bowker

6/30 1 Williams Land, Harvard - Steve Moore
 7/3 12+ E Longmeadow - Karen Parker
 7/5 82 MHF, Sharon - Erik Nielsen
 7/8 100 Maudslay SP, NP - S. Stichter + Bo Zarembo
 7/11 103 New Marlborough - Mark Lynch+Sheila Carroll
 7/11 35+ Graves Farm, Williamsburg - MBC (B. Benner)
 7/17 65+ Leicester - Dolores Price#
 8/1 18 World's End, Hingham - Bob Bowker
 8/14 16 Muddy Brook, Ware - Brian Klassanos
 8/28 5 Williamstown - Bo Zarembo
 9/1 2 Maudslay SP, NP - Bo Zarembo
 9/6 1 E Longmeadow - Karen Parker
 9/17 1 Larkin RA, Northbridge - Bob Bowker

Monarch

5/15 1 Ffolliott's Farm, Ipswich - Sissy Ffolliott
 5/17 1 Cherry Hill Res, W Newbury - S. and J. Stichter
 5/25 1 E Longmeadow - Karen Parker
 5/25 1 AP, Dartmouth - Lauren Miller-Donnelly
 5/30 1 Winchendon - Carl Kamp
 6/26 2 Florence - Tom Gagnon
 6/27 18 Graves Farm, Williamsburg - Bill Benner
 7/2 4 MBWMA, Newbury - Sharon and Joe Stichter
 7/3 3 GBH, Canton - MBC (S.Moore+B.Volkle)
 7/11 10 Graves Farm, Williamsburg - MBC (Bill Benner)
 7/31 20 LPWS, Barnstable - Alison Robb#
 8/8 6 Muddy Brook, Ware - Brian Klassanos
 8/21 47 Cheshire-Savoy - Mark Lynch+Sheila Carroll
 9/11 120 Gooseberry Neck, Westport - Brian Cassie
 9/17 8 Mount Tom State Res. - Tom Gagnon
 9/19 12 G35 Quabbin - Mark Lynch+Sheila Carroll
 9/21 147 Gooseberry Neck, Westport - M. Champagne
 9/25 24 NAC, Concord - MBC (Erik Nielsen)
 10/8 60 World's End, Hingham - Bob Bowker
 10/11 45 Katama, Edgartown - Matt Pelikan
 10/14 1 Deerfield - Jeff Boettner
 10/26 1 Baldwinville - Earle Baldwin
 10/28 3 World's End, Hingham - Bob Bowker
 10/30 17 AP Allens Neck, Dartmouth - Erik Nielsen
 10/31 1 Nahant - Linda Pivacek

Silver-spotted Skipper

5/14 1 Dinosaur Footprints TTOR, Holyoke -
 MBC (Tom Gagnon)
 5/15 2 Weir Hill Res, N Andover - MBC
 (H. Hoople+ R. Hopping)
 5/27 1 Wellfleet Bay Ws, Wellfleet - Mark Faherty
 5/30 5 Muddy Brook, Ware - Brian Klassanos
 5/30 1 Whately - Bill Benner
 6/16 7 MBWMA, Newbury - Joe Stichter
 6/18 5 Little River Nature Trail, NP - Sharon Stichter
 6/30 7 CST, N/W. borough - Steve Moore+Barbara Volkle
 7/2 2 Cummington - Barbara Spencer
 7/3 102 Old Town Hill, Newbury - Erik Nielsen
 7/3 8 Cummington - Barbara Spencer
 7/3 34 Cherry Hill Res, W Newbury - Erik Nielsen
 7/11 20+ Graves Farm, Williamsburg - MBC (B. Benner)
 7/17 40 Leicester - Dolores Price#
 7/18 5 Royalston - Carl Kamp
 7/22 1 Chicopee - Moe O'Connor
 8/13 6 Sherborn PL - Bob Bowker+Leslie Stillwell
 8/21 5 FS WMA, Longmeadow - Bo Zarembo
 8/21 2 Sylvan Nursery, Westport - Madeline Champagne
 9/3 1 Northampton CG - Bill Benner

Hoary Edge

4/21 3 Wellfleet Bay Ws, Wellfleet - Mark Faherty
 6/6 1 Robinson Sp, Agawam - Carl Kamp+Alyce Mayo

6/21 2 HPM, Woburn - Sue+Ron Cloutier
 6/27 2 HPM, Woburn - Erik Nielsen #

Southern Cloudywing

5/25 1 Pump House, Athol - Frank Model
 6/24 1 Hatchville Woods, Falmouth - Alison Robb
 6/25 1 HPM, Woburn - Sharon Stichter
 6/26 2 Water Tower Field, NP - Bo Zarembo
 6/29 1 MBWMA, Newbury - Sharon Stichter

Northern Cloudywing

5/1 2 Ware River Watershed, Barre - M.Lynch+S.Carroll
 5/15 2 Weir Hill Res, N Andover - MBC
 (H. Hoople+ R. Hopping)
 5/21 1 BMB WS, Worcester - Dolores Price
 5/21 2 HPM, Woburn - Bob Bowker
 5/23 1 MSSF, Plymouth - MBC (E.Nielsen)
 5/30 4 Dauphinais Park, Grafton - Dolores Price
 5/30 3 MBWMA, Newbury - Sharon and Joe Stichter
 6/2 10 Doyle Res.TTOR, Leominster - Russ Hopping
 6/18 2 World's End, Hingham - Bob Bowker
 6/19 1 Royalston - Carl Kamp
 6/19 1 Muddy Brook, Ware - Brian Klassanos
 6/26 1 HPM, Woburn - MBC (Steve Moore)
 6/30 2 Millennium Park, Roxbury - Bob Bowker

Dreamy Duskywing

4/30 1 Sherborn PL - Bob Bowker
 5/1 1 Muddy Brook, Ware - Brian Klassanos
 5/2 1 Lamson Rd, Foxborough - M.Champagne+B.Cassie
 5/4 2 NCM, Petersham - Ron+Sue Cloutier
 5/7 3 Baseball Field, Rowley - Sharon Stichter
 5/10 9 Sherborn PL - Bob Bowker
 5/14 3 Dinosaur Footprints TTOR, Holyoke -
 MBC (T. Gagnon)
 5/21 5 BMB WS, Worcester - Dolores Price
 5/23 2 MSSF, Plymouth - MBC (E.Nielsen)
 5/26 1 Lamson Rd, Foxborough - Madeline Champagne
 5/30 2 Dauphinais Park, Grafton - Dolores Price
 5/30 1 Muddy Brook, Ware - Brian Klassanos
 5/30 6 MBWMA, Newbury - Sharon and Joe Stichter

Sleepy Duskywing

4/21 9 W Tisbury SF - Matt Pelikan
 4/23 1 Wellfleet - Mark Faherty
 4/24 3 Westfield - Tom Gagnon#
 4/24 18 MV SF - Matt Pelikan
 4/24 18 MSSF, Plymouth - Erik Nielsen
 4/24 3 CST, Westborough - Steve Moore+Barbara Volkle
 5/7 23 W Tisbury SF - Matt Pelikan
 5/11 1 Lamson Rd, Foxborough - Madeline Champagne
 5/11 3 Brentwood CA, Holliston - Bob Bowker
 5/16 3 Carney Res., Northborough - S.Moore+B.Volkle
 5/16 2 Delaney WMA, Stow - Steve Moore
 5/21 1 HPM, Woburn - Bob Bowker
 5/23 1 Holden - Carl Kamp
 5/23 4 MSSF, Plymouth - MBC (E.Nielsen)

Juvenal's Duskywing

4/15 1 Weir Hill Res, N Andover - Howard Hoople
 4/20 1 Little River Nature Trail, NP - Bo Zarembo
 4/20 3 Weir Hill Res, N Andover - Russ Hopping
 4/20 5 Sherborn PL - Bob Bowker
 4/21 4 Great Meadow, Arlington - Tom Whelan
 4/21 17 W Tisbury SF - Matt Pelikan
 4/24 43 MV SF - Matt Pelikan
 5/1 7 Acton - Tom Whelan
 5/1 13 Ware River Watershed, Barre -M.Lynch+S.Carroll
 5/2 22 MBWMA, Newbury - Sharon and Joe Stichter

5/2 20 Dauphinais Park, Grafton - Dolores Price
 5/2 36 S Quabbin - Mark Lynch+Sheila Carroll
 5/6 25 Appleton Farms, Ipswich - Sharon Stichter #
 5/6 30+ Met State, Waltham - Jason Forbes
 5/10 29 Sherborn PL - Bob Bowker
 5/13 25 World's End, Hingham - Bob Bowker
 5/15 20 Weir Hill Res, N Andover - MBC
 (H. Hoople+R. Hopping)
 5/17 14 Dunback Meadows, Lexington -
 B.Bowker+F.Bouchard
 5/21 15 Tom Swamp, Petersham - Bo Zarembo
 5/25 12 Tom Swamp, Petersham - Frank Model
 5/30 10 Muddy Brook, Ware - Brian Klassanos
 6/3 3 Sherborn PL - Bob Bowker
 6/4 2 Nat's Farm, W Tisbury - Matt Pelikan
 6/5 1 Royalston - Carl Kamp+Alyce Mayo
 6/6 3 Crane WMA, Falmouth - Alison Robb
 6/7 1 MCRT - Muddy Pond, Rutland - Elise Barry

Horace's Duskywing

4/20 1 Weir Hill Res, N Andover - Russ Hopping
 4/24 1 MSSF, Plymouth - Erik Nielsen
 5/7 1 W Tisbury SF - Matt Pelikan
 5/20 1 MCP, Burlington/Woburn - Bob Bowker
 5/21 1 HPM, Woburn - Bob Bowker
 6/3 3 Sherborn PL - Bob Bowker
 6/26 5 GBH, Canton - E.Nielsen+R.Hamburger
 7/3 2 GBH, Canton - MBC (S.Moore+B.Volkle)
 7/5 1 MHF, Sharon - Erik Nielsen
 7/10 5 Blackstone Valley NABA - Tom Dodd
 7/15 1 DCR Sterling Rd, Holden - Elise Barry
 7/20 1 S-C TTOR, N Andover - Russ Hopping
 7/24 15 Bristol NABA - Mark Mello
 9/16 1 Northampton CG - Tom Gagnon
 9/21 1 Chelmsford PL - Bob Bowker
 9/24 1 Dunback Meadows, Lexington - Bob Bowker

Wild Indigo Duskywing

5/7 1 GBH, Canton - Sam Jaffe
 5/15 16 Delaney WMA, Stow - MBC (Tom Murray)
 5/15 1 Weir Hill Res, N Andover - MBC
 (H. Hoople+R. Hopping)
 5/17 1 Cherry Hill Res, W Newbury - S. and J. Stichter
 5/20 1 Muddy Brook, Ware - Brian Klassanos
 5/21 2 HPM, Woburn - Bob Bowker
 5/23 1 Rowden Yard, Leicester - Mark Rowden
 5/23 4 MSSF, Plymouth - MBC (E.Nielsen)
 5/30 10 Boxford - Russ Hopping
 7/3 11 GBH, Canton - MBC (S.Moore+B.Volkle)
 7/15 12 Weir Hill Res, N Andover - Russ Hopping
 7/17 20 Carney Res., Northborough - S.Moore+B.Volkle
 7/31 12 Marston Mills Airport - Alison Robb#
 8/28 12 Robin Hill Road, Milford - Steve Moore #
 9/19 4 Northampton CG - MBC (Benner+Gagnon)
 9/19 1 W Bridgewater - Don Adams
 9/20 9 Delaney WMA, Stow - Steve Moore
 10/2 2 Robin Hill Rd, Marlborough - Steve Moore
 10/10 2 Beverly - Karen Haley

Common Sootywing

5/1 1 Muddy Brook, Ware - Brian Klassanos
 5/2 1 Northampton - Joshua Rose
 5/20 2 MCP, Burlington/Woburn - Bob Bowker
 5/23 1 Rowden Yard, Leicester - Mark Rowden
 5/30 5 Dauphinais Park, Grafton - Dolores Price
 7/15 2 Fresh Pond, Cambridge - Fred Bouchard
 7/11 7 Muddy Brook, Ware - Brian Klassanos
 7/17 1 Cranberry Wetland, Foxborough - M. Champagne

8/15 2 Tangerinis, Millis - Madeline Champagne
 8/26 1 Muddy Brook, Ware - Brian Klassanos
 9/3 2 Northampton CG - Bill Benner
 9/20 1 Delaney WMA, Stow - Steve Moore

Arctic Skipper

5/28 9 Windsor - Bo Zarembo
 5/30 1 Royalston - Carl Kamp
 5/30 10 Moran WMA, Windsor - Tom Gagnon#

Least Skipper

5/29 8 AF, Hamilton/Ipswich - Sharon and Joe Stichter
 5/30 4 Muddy Brook, Ware - Brian Klassanos
 5/31 31 MHF, Sharon - Erik Nielsen
 6/4 11 Nat's Farm, W Tisbury - Matt Pelikan
 6/11 11 AF, Hamilton/Ipswich - Sharon Stichter#
 6/19 3 Gill - Carl Kamp
 6/20 5 Town Farm TTOR, Westport - Russ Hopping #
 6/30 6 Cooper N.Pasture, NP - Sharon Stichter
 8/13 18 AP, Dartmouth - Madeline Champagne
 8/14 11 Muddy Brook, Ware - Brian Klassanos
 8/15 9 Fowl Meadows, Milton - Bo Zarembo
 8/21 43 FS WMA, Longmeadow - Bo Zarembo
 9/19 1 Northampton CG - MBC (Benner+Gagnon)
 9/21 1 AP Field Station, Dartmouth - M. Champagne
 9/26 1 Wayland CG - Jason Forbes

European Skipper

5/27 1 Sutton - Dolores Price
 6/4 3 Nat's Farm, W Tisbury - Matt Pelikan
 6/5 8 Broadmoor WS, Natick - Bob Bowker
 6/6 6 Robinson Sp, Agawam - Carl Kamp+Alyce Mayo
 6/14 25+ S-C TTOR, N Andover - Russ Hopping
 6/15 40+ GBH, Canton - Steve Moore #
 6/18 24+ Hinsdale - Frank Model
 6/18 200+ Graves Farm, Williamsburg - Frank Model
 6/21 20 Maudslay SP, NP - Sharon Stichter
 6/27 52 Graves Farm, Williamsburg - Bill Benner
 7/6 5 Moore SP, Paxton - Elise Barry
 7/8 2 Maudslay SP, NP - S. Stichter + Bo Zarembo
 7/16 5 Mount Greylock - Tom Gagnon
 7/31 16 Monterey - Mark Lynch+Sheila Carroll

Fiery Skipper

9/4 1 Sylvan Nursery, Westport - Madeline Champagne
 9/29 1 Barnstable - Mark Faherty
 10/2 1 NAC, Concord - Barbara Volkle #
 10/8 1 AP, Dartmouth - M. Champagne+F. Model
 10/10 1 Beverly - Karen Haley
 10/11 2 AP, Dartmouth - Bob Bowker
 10/17 1 Stump Dump, Nahant - Erik Nielsen

Leonard's Skipper

8/14 2 BMB WS, Worcester - Steve Moore#
 8/15 1 MCRT - River St.P.-Garden, Holden - Elise Barry
 8/19 1 Rauscher Farm, Clinton - Madeline Champagne
 8/20 1 Florence - Tom Gagnon
 8/21 1 Muddy Brook, Ware - Brian Klassanos
 8/27 3 Milford PL - Bob Bowker
 8/28 1 Williamstown - Bo Zarembo
 8/28 2 Sherborn PL - Steve Moore #
 9/6 1 E Longmeadow - Karen Parker
 9/14 10 Wasque, Edgartown - Russ Hopping
 9/14 3 Long Point, W Tisbury - Russ Hopping
 9/16 1 Wellfleet Bay WS, Wellfleet - Mark Faherty
 9/18 1 AP, Dartmouth - MBC (Lauren Miller-Donnelly)

Cobweb Skipper

5/4 1 Oak Bluffs - Tom Chase

5/6 5 Florence - Tom Gagnon
5/10 1 Chickatawbut Hill, Milton - Sam Jaffe
5/14 16 Florence - MBC (Tom Gagnon)
5/15 2 SF, Edgartown - Matt Pelikan
5/23 1 MSSF, Plymouth - MBC (E.Nielsen)
5/25 1 Pump House, Athol - Frank Model
6/3 2 Sherborn PL - Bob Bowker

Indian Skipper

5/15 1 Weir Hill Res, N Andover - MBC
(H. Hoople+R. Hopping)
5/16 1 MHF, Sharon - Madeline Champagne
5/20 2 Juniper Hill, Lexington - Steve Moore
5/21 6 HPM, Woburn - Bob Bowker
5/21 1 Muddy Brook, Ware - Brian Klassanos
5/22 29 Florence - Tom Gagnon+Bruce Ripley
5/25 6 Brentwood CA, Holliston - Bob Bowker
5/31 3 Crane WMA, Falmouth - Alison Robb
5/31 4 MHF, Sharon - Erik Nielsen
6/4 18 Nat's Farm, W Tisbury - Matt Pelikan
6/8 1 MCRT - Mouton Pond, Rutland - Elise Barry

Peck's Skipper

5/15 3 E Longmeadow - Karen Parker
5/15 2 Natick - Greg Dysart
5/15 2 Delaney WMA, Stow - MBC (Tom Murray)
5/16 2 Carney Res., Northborough - S.Moore+B.Volkle
5/16 3 Westborough WMA - Wendy Miller
5/23 1 Tom Swamp, Petersham - MBC (Tom Gagnon)
5/31 31 Sprague St., Foxborough - Madeline Champagne
6/2 10 Doyle Res.TTOR, Leominster - Russ Hopping
6/5 6 Royalston - Carl Kamp+Allyce Mayo
7/26 10 Springfield - Bob Bowker+Bob Tynan
7/30 200 Stichter Yard, Newbury - Sharon Stichter
7/31 35+ E Longmeadow - Karen Parker
8/11 32 MPRA, W Newbury - Bo Zaremba
9/21 33 Feely Park, Sudbury - B. Bowker+L. Stillwell
10/8 3 AP, Dartmouth - M. Champagne+F. Model
10/10 2 Beverly - Karen Haley
10/10 1 NP - Bo Zaremba
10/11 1 Amherst - Joshua Rose

Tawny-edged Skipper

5/14 1 E Longmeadow - Karen Parker
5/16 1 Oak Bluffs - Matt Pelikan
5/20 1 Muddy Brook, Ware - Brian Klassanos
5/21 2 Rochester - Russ Hopping
5/22 4 Florence - Tom Gagnon+Bruce Ripley
5/25 6 Maudslay SP, NP - Bo Zaremba
5/30 6 Boxford - Russ Hopping
5/31 14 MHF, Sharon - Erik Nielsen
7/31 10+ E Longmeadow - Karen Parker
7/31 15 Marston Mills Airport - Alison Robb#
8/27 3 Milford PL - Bob Bowker
8/28 1 Williamstown - Bo Zaremba
9/19 1 Northampton CG - MBC (Benner+Gagnon)
10/2 1 Oak Bluffs - Matt Pelikan
10/11 1 AP, Dartmouth - Bob Bowker
10/11 1 Katama, Edgartown - Matt Pelikan

Crossline Skipper

6/25 2 Quabbin Park, Belchertown - Sue+Ron Cloutier
6/26 1 GBH, Canton - E.Nielsen+R.Hamburger
6/26 4 HPM, Woburn - MBC (Steve Moore)
6/27 1 Graves Farm, Williamsburg - Bill Benner
6/29 1 Tower Hill, Boylston - Wendy Miller
6/30 2 Water Tower PL, NP - Sharon Stichter
7/1 7 MV SF - Matt Pelikan
7/17 2 MBWMA, Newbury - Sharon and Joe Stichter

7/18 1 CST, Marlborough - MBC (S.Moore+B.Volkle)
7/25 3 Wendell - Carl Kamp#

Long Dash

5/25 5 Maudslay SP, NP - Bo Zaremba
5/25 3 Brentwood CA, Holliston - Bob Bowker
5/26 6 S-C TTOR, N Andover - Russ Hopping
5/30 3 Dauphinais Park, Grafton - Dolores Price
5/30 1 Winchendon - Carl Kamp
5/31 3 Crane WMA, Falmouth - Alison Robb
6/4 22 Nat's Farm, W Tisbury - Matt Pelikan
6/5 5 Royalston - Carl Kamp+Allyce Mayo
6/18 4 Hinsdale - Frank Model
6/19 2 Royalston - Carl Kamp
7/3 3 GBH, Canton - MBC (S.Moore+B.Volkle)
8/2 1 Royalston - Carl Kamp
8/17 2 MPRA, W Newbury - Bo Zaremba
8/20 1 AF, Hamilton/Ipswich - Howard Hoople

Northern Broken-Dash

6/21 1 GBH, Canton - Sue+Ron Cloutier
6/27 1 Muddy Brook, Ware - Brian Klassanos
6/27 11 HPM, Woburn - Erik Nielsen #
6/29 1 Barry Yard, Paxton - Elise Barry
6/29 1 Graves Farm, Williamsburg - Tom Gagnon#
7/2 24 MBWMA, Newbury - Sharon and Joe Stichter
7/8 200 Maudslay SP, NP - S. Stichter + Bo Zaremba
7/11 12 Whately - Bill Benner
7/15 22 Fruitlands, Harvard - Sharon Stichter
7/17 15 MBWMA, Newbury - Sharon and Joe Stichter
7/18 8 F&G Fields, Westborough - MBC
(S.Moore+B.Volkle)

7/26 6 Springfield - Bob Bowker+Bob Tynan
7/30 1 Stichter Yard, Newbury - Sharon Stichter
7/31 4 LPWS, Barnstable - Alison Robb#
7/31 2 Marston Mills Airport - Alison Robb#
8/28 1 Milford PL - Steve Moore #

Little Glasswing

6/17 1 Muddy Brook, Ware - Brian Klassanos
6/18 1 MBWMA, Newbury - Sharon Stichter
6/19 1 Athol - Carl Kamp
6/19 1 E Longmeadow - Karen Parker
6/26 25+ Water Tower Field, NP - Bo Zaremba
6/26 11 HPM, Woburn - MBC (Steve Moore)
6/29 14 MBWMA, Newbury - Sharon Stichter
6/29 9 Graves Farm, Williamsburg - Tom Gagnon#
7/6 8 Moore SP, Paxton - Elise Barry
7/11 1 Whately - Bill Benner
7/11 1 Graves Farm, Williamsburg - MBC (Bill Benner)
7/15 2 Fuitlands, Harvard - Sharon Stichter
7/19 1 Muddy Brook, Ware - Brian Klassanos
7/24 2 Rowden Yard, Leicester - Mark Rowden
7/25 1 Wendell - Carl Kamp#

Sachem

8/21 1 Sylvan Nursery, Westport - Madeline Champagne
8/27 1 AP Field Station, Dartmouth - M. Champagne
10/8 2 AP, Dartmouth - M. Champagne+F. Model
10/11 2 AP, Dartmouth - Bob Bowker

Delaware Skipper

6/20 1 Town Farm TTOR, Westport - Russ Hopping #
6/23 2 Medfield - Sam Jaffe
6/25 6 MCP, Burlington/Woburn - Sharon Stichter
6/28 2 Barneys Joy, Dartmouth - Lauren Miller-Donnelly
6/29 2 Graves Farm, Williamsburg - Tom Gagnon#
6/29 1 Fuitlands, Harvard - Sharon Stichter
7/1 1 Westborough - Barbara Volkle

7/2 4 MBWMA, Newbury - Sharon Stichter
7/8 2 Tully Dam, Royalston - MBC (Frank Model)
7/16 1 Mount Greylock - Tom Gagnon
7/21 2 October Mountain SF - Tom Gagnon #
7/25 1 Wendell - Carl Kamp#
7/25 1 Muddy Brook, Ware - Brian Klassanos
9/23 1 Sherborn PL - Bob Bowker+Lesley Stillwell

Mulberry Wing

6/30 23 CST, N/W.borough - S.Moore+B.Volkle
7/1 5 AF, Hamilton/Ipswich - Sharon and Joe Stichter
7/5 26 Sherborn Gas Line - Bob Bowker
7/5 9 MHF, Sharon - Erik Nielsen
7/8 20 Branch Bridge, New Salem - MBC (Frank Model)
7/12 1 E Longmeadow - Karen Parker
7/12 6 Cummington - Barbara Spencer
7/17 5 CST, Northborough - Steve Moore+Barbara Volkle
7/18 5 Muddy Brook, Ware - Brian Klassanos

Hobomok Skipper

5/6 1 Met State, Waltham - Jason Forbes
5/6 2 Barry Yard, Paxton - Elise Barry
5/10 3 Sherborn PL - Bob Bowker
5/11 1 Weir Hill Res, N Andover - Howard Hoople
5/13 2 World's End, Hingham - Bob Bowker
5/16 5 S-C TTOR, N Andover - Bob Bowker #
5/17 2 Mount Tom State Res - Carl Kamp
5/21 3 CST, Westborough - Steve Moore+Barbara Volkle
5/27 14 Little River Nature Trail, NP - Bo Zaremba
5/30 5 Whately - Bill Benner
6/6 8 Robinson Sp, Agawam - Carl Kamp+Alyce Mayo
6/9 7 MBWMA, Newbury - Sharon and Joe Stichter
6/12 3 Rehoboth - MBC (Lauren Miller-Donnelly)
6/18 5 Little River Nature Trail, NP - Sharon Stichter
6/19 2 E Longmeadow - Karen Parker
6/20 1 Muddy Brook, Ware - Brian Klassanos
6/29 1 Barry Yard, Paxton - Elise Barry

Zabulon Skipper

5/8 1 E Longmeadow - Karen Parker
5/22 2 E Longmeadow - Karen Parker
5/28 1 AP Allens Neck, Dartmouth - L. Miller-Donnelly
6/3 2 AP Allens Neck, Dartmouth - L. Miller-Donnelly
6/15 2 Fowl Meadows, Milton - Sam Jaffe
8/7 3 E Longmeadow - Karen Parker
8/13 3m Fowl Meadows, Milton - Sam Jaffe
8/13 1 Westport - Mark Lynch+Sheila Carroll
8/21 4m FS WMA, Longmeadow - Bo Zaremba
8/28 3m E Longmeadow - Karen Parker

Broad-winged Skipper

7/2 1 Stichter Yard, Newbury - Sharon Stichter
7/7 5 Stichter Yard, Newbury - Sharon Stichter
7/10 1 Haley Yard, Marblehead - Karen Haley
7/11 3 G35 Quabbin - Cloutier#
7/11 1 Boxford - Russ Hopping
7/17 2 Oak Bluffs - Matt Pelikan
7/18 25 CST, Marlborough - MBC (S.Moore+B.Volkle)
7/18 2 E Longmeadow - Karen Parker
7/20 2 S-C TTOR, N Andover - Russ Hopping
7/31 8 Westport - Madeline Champagne
8/1 7 World's End, Hingham - Bob Bowker
8/27 1 AP Field Station, Dartmouth - M. Champagne
10/8 2 World's End, Hingham - Bob Bowker

Dion Skipper

6/27 1 Graves Farm, Williamsburg - Bill Benner
7/4 1 Fitzgerald Lake, Florence - Frank Model
7/5 1 Hinsdale - Frank Model

7/7 3 Fitzgerald Lake, Florence - Frank Model
7/11 2 Cummington - Barbara Spencer
7/11 1 Graves Farm, Williamsburg - MBC (Bill Benner)
7/11 1 Fitzgerald Lake, Florence - MBC (Bill Benner)
7/12 1 Cummington - Barbara Spencer
7/16 1 Fitzgerald Lake, Florence - Frank Model
7/17 1 C Berkshire NABA - Tom Tying

Black Dash

6/28 1 Sherborn PL - Bob Bowker
6/29 9 Sherborn Gas Line - Bob Bowker
7/1 4 AF, Hamilton/Ipswich - Sharon and Joe Stichter
7/3 7 Muddy Brook, Ware - Brian Klassanos
7/5 6 MHF, Sharon - Erik Nielsen
7/5 29 Sherborn Gas Line - Bob Bowker
7/8 24 Branch Bridge, New Salem - MBC (Frank Model)
7/11 16 Muddy Brook, Ware - Brian Klassanos
7/15 1 Fruitlands, Harvard - Sharon Stichter
7/18 3 Muddy Brook, Ware - Brian Klassanos

Dun Skipper

6/3 1 Sherborn PL - Bob Bowker
6/26 2 HPM, Woburn - MBC (Steve Moore)
6/27 1 Hyde Park - Paula Chasan
6/27 6 Graves Farm, Williamsburg - Bill Benner
6/27 1 Stackyard Rd, Rowley - Bo Zaremba
7/1 75+ MV SF - Matt Pelikan
7/6 10 Moore Sp, Paxton - Elise Barry
7/11 30+ Graves Farm, Williamsburg - MBC (B. Benner)
7/11 8 Boxford - Russ Hopping
7/16 4 S-C TTOR, N Andover - Russ Hopping
7/18 6 Muddy Brook, Ware - Brian Klassanos
8/1 5 World's End, Hingham - Bob Bowker
8/8 1 Muddy Brook, Ware - Brian Klassanos
8/8 1 E Longmeadow - Karen Parker
8/8 1 MCP, Burlington/Woburn - Sharon Stichter#
8/13 4 Sherborn PL - Bob Bowker+Leslie Stillwell
9/25 1 Wayland CG - MBC (Erik Nielsen)

Dusted Skipper

5/13 1 Florence - Tom Gagnon
5/14 4 Dinosaur Footprints TTOR, Holyoke - MBC (T. Gagnon)
5/15 2 SF, Edgartown - Matt Pelikan
5/21 12 Pump House, Athol - Bo Zaremba
5/22 110 Florence - Tom Gagnon+Bruce Ripley
5/24 24 Lamson Rd, Foxborough - Madeline Champagne
5/26 11 Lamson Rd, Foxborough - Madeline Champagne
5/27 9 Little River Nature Trail, NP - Bo Zaremba
5/31 1 Muddy Brook, Ware - Brian Klassanos
5/31 3 MHF, Sharon - Erik Nielsen
6/4 6 Lamson Rd, Foxborough - Madeline Champagne
6/9 1 MBWMA, Newbury - Sharon and Joe Stichter
6/12 1 Rehoboth - MBC (Lauren Miller-Donnelly)

Pepper and Salt Skipper

5/15 2 Delaney WMA, Stow - MBC (Tom Murray)
5/20 3 MCP, Burlington/Woburn - Bob Bowker
5/21 4 CST, Westborough - Steve Moore+Barbara Volkle
5/23 1 Tom Swamp, Petersham - MBC (Tom Gagnon)
5/27 2 Delaney WMA, Stow - Madeline Champagne
5/28 5 Windsor - Bo Zaremba
5/30 7 Mount Greylock - Tom Gagnon#
5/31 1 E Longmeadow - Karen Parker
6/11 1 AF, Hamilton/Ipswich - Howard Hoople

Common Roadside-Skipper

6/4 1 Mount Greylock - Tom Fiore

Abbreviations:

AP – Allens Pond, BMB – Broad Meadow Brook MAS, CG – Community Gardens, CRP – Charles River Peninsula, CST – Crane Swamp Trail, F&G – Fish and Game, FPB – Fort Pond Brook, FS – Fannie Stebbins, GBH – Great Blue Hill, GM – Great Meadows, HPM – Horn Pond Mountain, IRP – Ipswich River Park, IRWS – Ipswich River Wildlife Sanctuary, Little’s Farm – Spencer-Pierce Little Farm, MAS – Mass. Audubon Sanctuary, MB – Martin Burns, MHF – Moose Hill Farm, ML – Mystic Lakes, MMP – Mountain Meadow Preserve, MPRA – Mill Pond Recreational Area, MS – Myles Standish, MV – Martha’s Vineyard, NAC – Nine Acre Corner, NCM – North Common Meadows, NP – Newburyport, NRT – Norwottuck Rail Trail, NWR – National Wildlife Reservation, PL – Power Line, Res. – Reservoir or Reservation, RM – Rumney Marsh, S-C – Stevens-Coolidge, SF – State Forest, SP – State Park, TTOR – The Trustees of Reservations, WMA – Wildlife Management Area, WRR – Waskosim Rock Reservation.



Egg Stories

The Black Swallowtail egg below was freshly-laid on September 11, 2010. That tells us that Black Swallowtail is trying for three broods, even at Appleton Farms, in Ipswich, north of Boston.

The egg was found in a well-used cow pasture, between piles of cow manure. The Queen Anne's Lace was still green and sprouting in September, with young, tender foliage which butterfly larvae prefer. The plant did not have a central fruiting stalk, indicating either that it had been grazed by cattle or was a first-year plant just putting out new shoots.

If agricultural fields are not too heavily grazed or plowed, they provide excellent habitat for Black Swallowtails. Appleton Farms is always a good spot to see this species.



Black Swallowtail egg, Appleton Farms 9-11-2010, H. Hoople



Indian Skipper egg, Juniper Hill Lexington 5-31-2010 M. Rainey

While swallowtail eggs are smooth and round, many skipper eggs are dome-shaped. Anglewing eggs are ribbed, and often stacked. Both this Indian Skipper egg, and these Question Mark eggs found by Russ Hopping, were identified by watching them being laid.



Question Mark eggs, Appleton Farms 6-11-2010 H. Hoople

Submission of Articles, Illustrations, and Season Records

We encourage all members to contribute to *Massachusetts Butterflies*. Articles, illustrations, butterfly field trip reports, garden reports, and book reviews are all welcome, and should be sent to the Editor by September 15 for the Fall issue, and January 15 for the Spring issue.

Send NABA Fourth of July count results to Tom Gagnon tombwhawk@aol.com by **August 15** for inclusion in the Fall issue. Send your season sightings and records to Erik Nielsen by **December 31** for inclusion in the Spring issue. Records may now be submitted via the online checklist and reporting form, which is available for download from <http://www.massbutterflies.org/club-publications.asp> or from <http://www.massbutterflies.org/downloads/massbutterflies.xls>

Contributions

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