

# THE PEARLY-EYE 2009

Field Reports of the NABA North Jersey Butterfly Club

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## Pearly-Eye 2009 by Michael Gochfeld

My request for a volunteer to take over editing the Pearly-Eye has not yet yielded a volunteer. The offer and request are still open. Several people including J. Burgiel, D. Burnside, J. Connor, T. Halliwell, A. Koster, P. Murray, J. Springer, S & W. Wander, and F. Weber, responded to multiple requests for clarifications on locations and sightings. J. Burger was as usual very patient as I spent hours sorting through the spreadsheet to make sense of the observations. S. Wander and T. Halliwell read through the Pearly-Eye to help catch errors or clarify statements, and Sharon provided careful proofreading. Persistent errors are my responsibility. Some contributors sent in complete lists of all butterflies seen, while others sent in only observations they considered "special" in some way. The value of the data base is enhanced by its richness, and we can learn as much from reports of common "everyday" species, as we can from the specialties.

Thanks to everyone who submitted records. If you send your records to the NABA web site, please copy me [gochfeld@eohsi.rutgers.edu](mailto:gochfeld@eohsi.rutgers.edu) on the submissions.

Another encouragement: Coordinators of NABA field trips and 4JCs, please send complete lists (including locations of "special species" and party information).

Overall 65 people submitted about 4350 records for MON-MER northward, compared with 56 people and

about 5750 records in 2008 and 64 people and about 5190 records in 2007. Five contributors accounted for 63% of the records. Compared with 60% in 2008. Hudson and Union Counties continue to be poorly represented, but surprisingly so is Hunterdon. There were 437 records from Ocean Co.

## COUNTY REPORTS FOR 2009

		Morris	571
Bergen	126	Passaic	37
Essex	95	Somerset	465
Hudson	3	SOM-MID	36
Hunterdon	21	Sussex	2077
Mercer	229	SUS-WAR	54
Middlesex	146	Union	1
Monmouth	143	Warren	230

**FINALLY Readers who have 2009 records that weren't sent before, it's not too late. They can be added to the online data base for future reference and corrected in future issues.**

Records for South Jersey should be entered in the online log. Contact Jack Connor for details ([nacotejack@gmail.com](mailto:nacotejack@gmail.com))

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## 2009 Season

By all accounts 2009 was a dismal year for butterflies in northern and central New Jersey. It's safe to say that we all hope it will be the worst year ever. Bad weather persisted well into June. Although butterfly numbers bounced back by mid-summer, the cold, wet spring put a damper on butterfly activity and butterfly watching. Many observers commented that there were very few butterflies around in the spring, even on nice days. Univoltine spring species are therefore under-represented. Hairstreaks and skippers were particularly scarce. Various theories were advanced to explain the dearth of butterflies, including a cold winter with very little snow cover. The mood of NABA members can be characterized as depression, as reflected in the drop in reports. Two of the major contributors in 2008 were not able to maintain their former level of field activity. Several species continue to be absent from our area including the Arctic Skipper, Harris' Checkerspot, Acadian Hairstreak, and Frosted Elfin. Attempts to locate an overwintering spring brood of Giant Swallowtails were unsuccessful, despite the heavy summer 2008 flight and the discovery of larvae and pupae on Prickly Ash at several locations in the fall of 2008.



SPECIES	# reports 2009	# reports 2008	# reports 2007	Earliest 2009 Date	Earliest 2009 Record	Maximum Count		Maximum Season Count	Latest 2009 Date	Latest Record	All Time early record	All Time late record			
						Date	Number								
Silver-spotted Skipper	184	187	141	14-May	SOM:Somerset[PM]=1	11-Jul	77	SUS-WAR:Spring4JC	9-Oct	SOM:Somerset [MG]=1	4/26/2008	10/13/2003			
Long-tailed Skipper	1	4		31-Aug	MER:Plainsboro Pres. [HK]=1	Only one record in 2009						8/24/2000	10/8/1994		
Hoary Edge	14	6	19	6-Jun	PAS:Ringwood SP [JS]=1	11-Jul	9	SUS-WAR:Spring4JC	12-Jul	SUS:DWGNRA[B.Send]=1	5/22/2002	7/21/2001			
Southern Cloudywing	3	9	16	1-Jul	SUS:Flatbrookville [TH]=5+	24-Jun	13	SUS:Flatbrookville [JB,MB]	8-Jul	SUS:Flatbrookville [TH]=3+	5/15/1993	9/2/2007			
Northern Cloudywing	39	33	30	20-May	SUS:KVSP [TH]=1	19-Jun	16	SUS:KVSP [TH]=1	12-Jul	MER:Mercer 4JC=1	5/7/2001	7/26/2007			
Dreamy Duskywing	8	13	9	25-Apr	MON:Assunpink [NABA]=1	30-May	33	MOR:Wildcat Ridge [JS]	6-Jun	PAS:Ringwood SP [JS]=1	4/18/1998	6/26/2005			
Sleepy Duskywing	1	2		27-Apr	SUS:Crater Lk Rd [JB,MB]=1	Only one record in 2009						4/13/2006	6/1/2005		
Juvenal's Duskywing	42	75	39	27-Apr	SUS:Crater Lk Rd [JB,MB]=1	13-May	12	MOR:Mountainside Pk [TH]	7-Jun	MOR:Schooley Mtn [JS]=1 SUS:High Pt SP [NABA]=7	4/8/2000	6/28/2003			
Horace's Duskywing	11	28	46	24-May	SUS:Flatbrookville [JB,MB]=1	28-Jul	2	MER:Plainsboro Pr [HK]	18-Sep	MER:South Post Rd [HK]=1	5/10/2005	10/18/2008			
Wild Indigo Duskywing	41	62	67	9-May	MID:Mounts Mills [JS]=1	18-Jul	56	SOM-MID:Raritan 4JC	9-Oct	SOM:Negri Nepote[PM]=1	4/13/1998	10/23/1993			
Com Checkered-Skipper	12	40	34	8-May	SOM:Somerset[MG]=1	4-Oct	10	SOM:Negri Nepote [PW]	11-Oct	SOM:Negri Nepote [PW]=6	4/23/2007	11/14/05 x2			
Common Sootywing	8	9	15	31-May	SUS:Crater Lk Rd [JB,MB]=1	15-Jul	2	SOM:Negri Nepote[NABA] BER:Meadowlands[FW,DB]	7-Sep	MER:Assunpink[JS,CW]=1	4/30/2002	9/19/2005			
Arctic Skipper	0	0	0	NO RECORDS IN 2009 or 2008 or 2007								5/20/2001	6/21/1997		
Swarthy Skipper	12	14	21	25-Jun	MON:Sandy Hook 4JC =7	8-Aug	200+	MON:Big Brook [KIK]	7-Sep	MON:Assunpink[JS,CW]=6	5/22/1995	9/30/07			
Least Skipper	106	117	118	31-May	MOR:Schooley Mtn [JS,CW]=3	11-Jul	51	SUS-WAR:Spring4JC	4-Oct	SOM:Negri Nepote [PW]=1	5/21/2004	10/19/2006			
European Skipper	21	22	32	31-May	MOR:Willowood [JS]=1	7-Jun	40	MOR:Schooley Mtn[JS]	7-Jul	MOR:Roxbury [WW&SW]=2	5/25/2004	7/14/01			
Fiery Skipper	3	27	29	18-Jul	SUS:Blair Creek [GN,AB]=1	Only singleton records						9-Oct	SOM:Negri Nepote [PW]=1	7/3/2004	11/26/2001
Leonard's Skipper	4	2	6	19-Aug	SUS:Fredon [TH]=1	Only singleton records						2-Sep	SUS:Fredon[WW&SW]=1	8/11/2005	9/28/2005
Cobweb Skipper	2	5	3	13-May	MOR:Mountainside [TH]=4	13-May	4	MOR:Mountainside [TH]	21-May	SUS:Flatbrookville [JB]=1	4/24/2002	6/11/2008			
Indian Skipper	10	16	13	13-May	MOR:Mountainside [TH]=1	1-Jun	12	SUS:Crater Lk Rd[JB,MB]	17-Jun	SUS:KVSP [TH]=1	5/6/1990	6/30/2003			
Peck's Skipper	110	155	107	18-May	SOM:Somerset [PW]=1	8-Aug	400+	MON:Big Brook [KIK]	22-Oct	BER:Hackensack[WW&SW]=1	5/7/06	10/23/1995			
Tawny-edged Skipper	42	82	57	19-May	SOM:Somerset [PW]=1	30-Jun	15	MOR:Schooley Mtn[AK]	7-Sep	MID:Mounts Mills [JS,CW]=2	5/14/2002	10/14/1996			
Crossline Skipper	15	20	24	3-Jul	SUS:Vernon AT Land [VC]=1	11-Jul	6	SUS-WAR:Spring4JC	7-Sep	MID:Mounts Mills [JS,CW]=4	5/11/2002	10/2/1994			
Long Dash	9	2	11	25-May	MOR:Willowood [JS]=2	7-Jun	8	MOR:Schooley Mtn [JS]	3-Jul	SUS:Vernon AT [VC]=1	5/24/2002	7/8/2008			
Northern Broken-Dash	43	63	58	27-Jun	SUS:KVSP [TH]=1	12-Jul	47/55	[JS]	20-Aug	SUS:Flatbrook [FW]=6	5/27/1995	10/11/2004			
Little Glassywing	56	61	58	14-Jun	MOR:Troy Mdwos [JS,CW]=1	11-Jul	142	SUS-WAR:Spring4JC	27-Jul	SUS:Fredon [WW&SW]=1	6/1/2007	8/18/01			
Sachem	46	111	86	18-May	SOM:Somerset [PW]=2	24-Sep	100+	SOM:Somerset [MG]	22-Oct	SOM:Somerset [PW]=1	5/8/2002	11/1/2005			
Arogos Skipper	2	1	0	7-Jul	MOR:Kenvil [TH]=1	7-Jul	5	MOR:Arogos sites [WW&SW]=5	Only reported 7/7/09				6/30/2002	8/2/2003	
Delaware Skipper	33	47	43	21-Jun	SUS:DWGNRA [FW,DB]=1	11-Jul	90	Spring 4JC	20-Aug	SUS:Flatbrook [FW]=1	6/12/2004	9/1/2004			
Mulberry Wing	11	15	11	12-Jul	SUS:Fredon [WW&SW]=1	18-Jul	26	SOM-MID: Raritan 4JC	8-Aug	SUS:KVSP [TH]=2	6/27/2004	8/26/2003			
Hobomok Skipper	39	55	47	22-May	SUS:Mohican AT [JS]=2	7-Jun	62+	SUS:High Pt SP [NABA]	30-Jul	BER:Weber Yard	5/7/02	7/10/1999			
Zabulon Skipper	49	95	94	21-May	SOM:Somerset [MG]=1	12-Aug	12	MER:Sayen Gards [HK]	20-Sep	MON:Tatum Park [JS]=1	4/30/2004	10/17/1997			
Broad-winged Skipper	25	24	47	19-Jul	BER:Meadowlands[FW,DB]=40	19-Jul	40	BER:Meadowlands [FW,DB]	27-Aug	MON:Sandy Hook [BS]=2	6/28/06 x2	9/22/2004			
Dion Skipper	5	6	18	9-Jul	SUS:Whittingham [TH]=1	18-Jul	5	MID:Pigeon&Helmetta [JS] on Rar4JC	1-Aug	SUS:Hyper Humus [JB,MB]=1	6/20/1998	8/8/2004			
Black Dash	20	30	28	27-Jun	SUS:Vernon AT Land [HK]=1	11-Jul	38	SUS-WAR:Spring4JC	10-Aug	SUS:KVSP [TH]=1	6/20/04 x2	8/24/2003			
Dun Skipper	66	92	76	12-Jun	ESS:Mills Reserve [AB]=2	11-Jul	54	SUS-WAR:Spring4JC	21-Sep	SOM:Somerset [PW]=1	5/25/2004	10/9/2007			
Dusted Skipper	4	4	6	20-May	MOR:Wildcat Ridge [JB]=2	30-May	4	MOR:Wildcat Ridge [JB]	30-May	MOR:Wildcat Ridge [JB]=4	5/13/2006	6/20/2006			
Pepper and Salt Skipper	2	4	4	31-May	HUN:Bethlehem[JS et al]=4/3	7-Jun	11	SUS:High Pt SP [NABA]	7-Jun	SUS:High Pt. SP [NABA]=11	5/19/2001	6/21/1997			
Common Roadside-Skipper	1	1	1	22-May	WAR:AT near Mohican [JS]=1	Only one record in 2008 and 2009						5/14/2000	8/1/1998		
Ocola Skipper	0	0	1	NO RECORDS IN 2008 OR 2009								8/15/2000	10/22/1995		

Our daily observations of butterflies provide lots of opportunities to add to the relatively meager knowledge.

**NECTAR SOURCES:** With the increasing interest in planting butterfly gardens or restoring habitats, it is important to know what butterflies use. How does the use of native nectar sources compare with exotics? Attractiveness varies from place to place.

**LARVAL HOSTS:** Caterpillars of some species are generalists, while others are host specific to a particular species or genus or group of plants. There is undoubtedly lots to learn about the local host preferences of even common species.

**PREDATION:** Several people sent interesting reports of predation on butterflies from spiders to frogs. However, the greatest amount of predation occurs invisibly to us on the eggs, larvae, and pupal stages. Several people reported wasp parasitism on pupae, particularly on Giant Swallowtails.

**INVASIVE PLANTS:** What is the impact that invasive plants (with or without deer) have on native nectar plants and larval host species? In many areas deer-proof plants such as Garlic Mustard, Japanese Barberry and Stilt Grass form uniform monocultures in an understory devoid of native wildflowers and shrubs.

## New Jersey Butterflies for 2009

Table 1 (pages 2-3) lists all the species recorded in central & northern NJ, from Monmouth (MON) & Mercer (MER) north with the number of reports for 2009, 2008, and 2007. Also given are the earliest and latest records as well as the maximum count (Max) for 2009. The last two columns repeat the all-time earliest and latest dates. 2009 produced only one all-time early (Oak Hairstreak) and one all-time late (Hobomok Skipper) record. Additional species that do not occur in NJ from MER-MON northward, were reported from Ocean County: "Blueberry" and "Holly" Azures, Hoary Elfin, Hessel's Hairstreak, Georgia Satyr, Dotted Skipper, and Two-spotted Skipper.

With such an inter-year discrepancy in the total number of reports, the between-year comparison of the number of reports has to be interpreted carefully. In 2009 ten species accounted for 50% of all reports, which is no doubt an under-representation since many observers do not report common species.

### WEATHER IN 2009 BASED ON SOMERSET OBSERVATIONS

**January:** Precipitation in early January was mainly rain (in cNJ). Latter half of January quite cold, with overall high not reaching 30°F. Very little snow cover.

**February:** 4" of snow on Feb 4, with no further accumulation. Temp in 40s on Feb 2 and Feb 25, but month colder than average.

**March:** 5" of snow on Mar 1, melted by Mar 4. Then cold and gray for most of month.

**April:** Very wet. Moderate temperature. First 70° day Apr 17. Later part of month with many warm sunny days including >90°F.

**May:** First week very wet with 5" of rain and no clear days. Some fair butterfly days in middle of month, but last week mostly wet and cloudy with only one sunny day between 5/24 and 5/31.

**June:** First week abysmal—rain and clouds and below average temperature and only one decent butterfly day (6/7). Few good butterfly days or even hours between 6/9 and 6/25.

**July:** Early part of month favorable and number of reports and butterflies picked up substantially. Nonetheless several 4JCs reported below average numbers for many species.

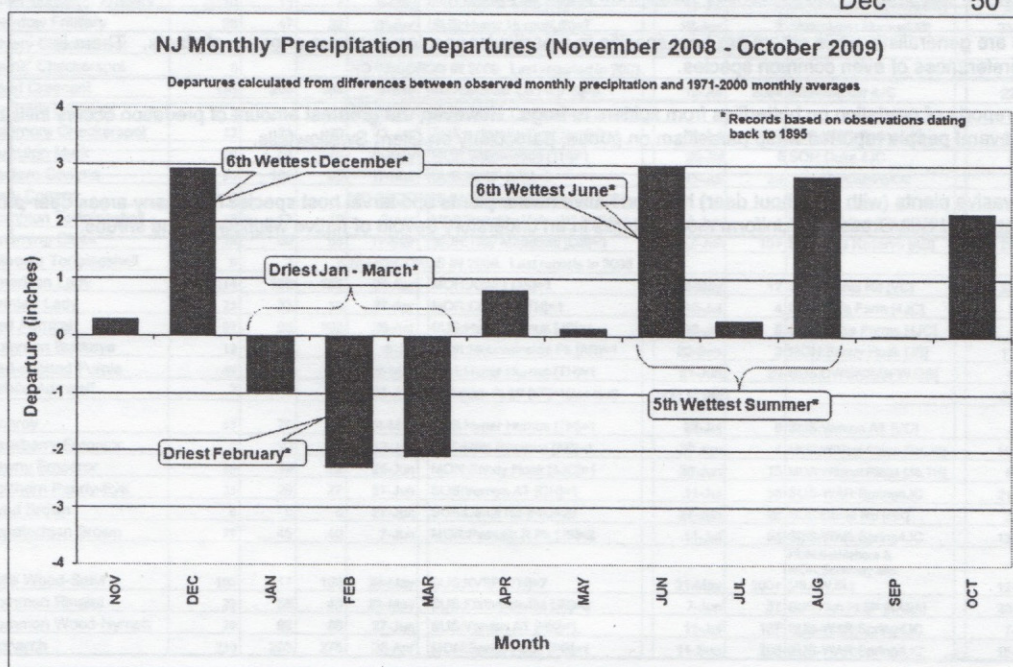
At the other end of the season, mid-October was mainly wet and cloudy, interfering with butterfly watching, so that many species had no typical October LATE records. As in previous autumns, Paula Williams and Patti Murray's visits to the Negri Nepote grasslands (SOM:Franklin Twp) yielded several late species records.

The graph below shows an unusually wet Dec., June, Oct, and entire summer, and a record dry Feb., and Jan-Mar periods corresponding to the dearth of snow

PSEG utility bills provide temperature information for the Newark area and can be used to compare among years. Clearly 2008 was a cold spring (as indicated in the 2008 Pearly-Eye) and 2009 was worse, with cooler temperatures throughout the spring and summer.

Four years of temperature averages from PSEG (shading indicates coolest month).

	2006	2007	2008	2009
Jan	36	46	38	36
Feb	44	32	38	28
Mar	33	30	36	35
Apr	47	45	44	43
May	59	54	57	55
Jun	65	69	63	64
July	75	74	77	71
Aug	82	78	79	75
Sept	74	73	74	77
Oct	66	70	66	63
Nov	54	60	52	53
Dec	50	41	44	51



## Annotated List of North and Central New Jersey Butterflies for 2009

Edited by Michael Gochfeld

For many of the species I have provided a comparison of the frequency of reports in 2009 vs 2008 & 2007. This does not, however, indicate the numbers seen, only the frequency of encounters. Species that were MORE frequently reported in 2009 than in both preceding years include Clouded Sulphur, Great Spangled Fritillary, and Mourning Cloak. Because there were 30% fewer overall reports, most species were reported LESS frequently in 2009. However, taking relative frequency into account (percent of total sightings), significant low counts included Pipevine & Spicebush Swallowtails, Banded, Gray & Red-banded Hairstreaks, Red Admiral, Common Buckeye, Viceroy, Common Ringlet, Southern Cloudywing, Horace's Duskywing, and Common Checkered, European, Fiery, Tawny-edged, Sachem, Hobomok & Zabulon Skippers. Many of these had more than 50% fewer reports than in prior years. To summarize, three species were "up" and 18 were "down".

**DISCLAIMER:** I have questioned "unlikely" records submitted on rare or out of range species, and have requested photo documentation in many cases. Users of this information should take into account that for some sight records uncertainty ranges from possible to likely. Conversely, however, some rare species may be overlooked because of their presumed unlikeliness (for example, Checkered White occurrences obscured among the abundant Cabbage Whites).

The foul spring weather (particularly on weekends) probably accounts for the dearth of reports for many univoltine spring species.

Also for many habitat specialists or localized species, the number of reports depends on exactly when and how often observers visit those sites in a given year.

95 species were recorded in 2009 compared with 100 in 2008 and 2007.

**Pipevine Swallowtail:** Observations are confused because of many releases of captive-reared butterflies. But despite these release efforts in previous years, only a handful of clearly wild Pipevines (4 records excluding recent releases) were seen all season, with no spring or September records. So far no evidence that new releases have led to established populations, even with many NABA members planting various Pipevine species. It is rumored that some horticultural Pipevines may be toxic to the larvae. The Palisades still has good numbers of Pipevine Swallowtails, with about 50 reported on 8/10 [VC].

**Black Swallowtail:** 84 records scattered throughout, compared with 99 in 2008, but relatively more numerous (2% vs 1.7% of all records. Earliest 4/26 SUS:Hamburg Twp [FP=1]. Most records in late July. No clear peaks or gaps in records. Latest 10/4 SOM:Negri Nepote [PW=6].

**Giant Swallowtail:** After many 2008 late-summer sightings and reports of larvae and pupae on Prickly Ash in northern NJ, an early spring 2009 brood was anticipated, but not found. Perhaps not enough visits were devoted to searching the Appalachian Trail area at the right time. No records until Aug 1, with 16 singleton records until Sept 6. Many larvae in early Sept at SUS:Whittingham [WW&SW].

**Eastern Tiger Swallowtail:** 235 reports is probably typical in frequency, and it comprised 5.4% of all sightings compared with 4.4% last year. But numbers in spring and early summer were relatively low with only two observations of 11 and 10, before a few double-digit days in August. Peaks in mid-Aug about the same time (and place, Willowood) as in 2008. Last on 9/21 SOM:Somerset Farms [PW=1].

**Spicebush Swallowtail:** Number of reports (101) is about half of 2008 (188), and only one double-digit day 8/15 at MOR:Willowood [TH=10+]. Latest on 9/15 in both SUS:Hyper Humus [TH] and MOR:Weis [AK]. Later Ocean County record on 9/20 in Tom's River [SW2].

**Checkered White:** The Newark Airport colony site was visited on four occasions [MG] from May through October with no success, but T.Vogel reported two there on 7/17. The colony spans the border of Union and Essex Counties. Lot P3 is mostly in Essex.

**Cabbage White:** The 3/17 Belleville record [VC] is a week earlier than in 2008. Relative frequency (10%) up from 2008 (8.4%). But numbers down from 2008. Only 381 noted on Raritan 4JC cf 1844 in 2008. Lasted a week later (11/8) than in 2008.

**Falcate Orangetip:** Probably typical year for this highly local species with populations in northwestern (SUS & MOR) and central (MON-MER) NJ. At Mercer Co. Park on 4/26 they were laying on Winter Cress (*Barbarea vulgaris*) but nectaring on Garlic Mustard [HK].

**Clouded Sulphur:** More observations (183) and higher numbers than in prior two years. First records 10 days later than in 2008 (4/25) although an unidentified sulphur was seen at Princeton on 4/18 (CWy). Summer peak of 174 on Walkill 4JC (7/12) and 150 on Springdale 4JC (7/11). Double digits again in early Oct, is typical for this species. Last on 11/15 at SUS:Fredon [WW&SW] and SOM:Somerset Farms [MG].

**Orange Sulphur:** Fewer records (229 vs. 254) but relatively more (5.2% vs 4.4%) than in 2008. First 3/21 at MOR:Mountainside [VC=1], three weeks earlier in than in 2008, and last 12/3 at SOM:Negri Nepote [PM=2], four weeks later than in 2008. Several triple-digit days at SOM:Negri Nepote in July.

**Cloudless Sulphur:** Only one record in 2009: 9/20 at MON:Sandy Hook [JS=1], compared with 15 records in 2008 and 23 in 2007. Only one OCE record 9/5 Toms River (SW2).

**Little Yellow:** No records in 2009. One record at Sandy Hook in 2008.

**Harvester:** This elusive species first recorded 5/15 at SUS:KVSP [TH=1], was only one day later than the record early 2008 sighting. AK made many visits to the MOR:Brookside Park site, finding it on nine days from 5/23 to 9/1, but with a maximum of only 2 individuals. Her vigilance was rewarded by a yard sighting on 8/4. Other records at MOR:Dismal Harmony Nat. Area and MOR:Schooley Mtn. Could not be found at the SOM:Raritan Canal site despite many visits. No reports from Scherman-Hoffman in 2009.

**American Copper:** Probably a typical year (68 reports), and relatively slightly more frequent than in 2008 and 2007, but peak count only 78 on 7/11: SUS-WAR:Springdale 4JC.

**Bog Copper:** A single record is typical for this highly local species; 6/28 at MID:Monroe Twp [JS & TJ=50]. Four Ocean Co reports from Lakehurst: Klots Bog.

**Satyrrium** Hairstreaks and indeed all hairstreaks, were remarkable by their virtual absence.

**Coral Hairstreak:** continues at low ebb with only 7 sightings (same as 2008). Five records from MON, MID, SOM & OCE. One SUS record 7/22 at:Vernon AT [VC=1] was the latest. Max count of 5 compared with 40 in 2008. If there is a spatial pattern, then earlier records are in the south and later records in the north.

**Edwards Hairstreak:** Only 2 reports in 2009, 7/11 on Springdale 4JC (Crater Lake Rd. and Stickle Pond Rd.) and 7/17 at SUS:AT area (½ mi sw of Mecca Gap) [JB=4].

**Banded Hairstreak:** Surely a candidate for the best (or worst) disappearing act in 2009, with only 13 reports, all from MOR northward. However, an OcE:Toms River sighting on 6/27 [SW2]. High count only 30 on 7/12 at (SUS:Walkill 4JC). The 2008 Max=196 on Springdale 4JC; this was down to 7 in 2009.

**Hickory Hairstreak:** No records in 2009. 7 records in 2008, including 4 parties on 2008 Springdale 4JC. This species is difficult to identify, so photo-documentation and study are helpful.

**Striped Hairstreak:** Also on a downwards spiral with only four reports from 7/4 MOR:Great Swamp 4JC[JB=4] to 7/19 SUS:Fredon [WW&SW =1]. 2008=6 and 2007=15 reports. The 4 individuals on the Great Swamp 4JC represent a new colony site [WW]. 3 OCE records from Lakehurst areas.

**Oak Hairstreak:** Always an exciting find, the one on 6/14 at MOR:Troy Meadows [JS,CW] was an all-time early record. and the only all-time early record set in 2009. Previous early record 6/17/2000.

**Brown Elfin:** Crater Lake Road continues to be a popular place to look for this. Is it as highly localized as the few site reports indicate (along AT and at Stokes)? 6 reports from 4/27 at SUS:Crater Lk [JB,MB=38] to 6/1 at SUS:Crater Lk Rd [JB,MB=6].

**Hoary Elfin:** This Bearberry specialist probably occurs in scattered colonies from Ocean Co. southward, but all 2009 south Jersey records (5) are from the Warren Grove site 4/13 to 5/9. Max 30+ there on 5/9 [NABA trip]. This species has a wildly disjunct range from Nova Scotia to Alaska. No records in our area, except for an historic record from Middlesex Co. (no data available).

**Frosted Elfin:** No records since 2005. Several of the Elfins are highly localized and the number of records reflects whether they were looked for or not. Vain searches therefore become notable. There were no reports of anyone trying to find Frosted Elfins in 2009. Visits to the Assunpink site in May, would confirm whether this colony survives or has been eliminated by overzealous habitat management along a virtually abandoned RR right of way. This species is particularly vulnerable to bad habitat management practices. Most South Jersey records are from Cape May Co: Lizard Tail Swamp where NABA-North Jersey [with WK & JC] saw >100 on 5/23.

**Henry's Elfin:** this holly feeder occurs mainly on the Coastal Plain, and our records are only from MON: Allaire & Sandy Hook, although holly occurs more widely. Number of sightings probably reflects effort more than status, but peak count of 7 in 2009 contrasts with 80 at Sandy Hook in 2008. Was that difference all effort? Do people stop counting after they have found their first few Henry's? It's not a species you just bump into while looking for other butterflies.

**Eastern Pine Elfin:** This species occurs in nwNJ, mainly in SUS. It occurs more widely in the Pine Barrens, with no sites known in between. Only four reports in 2009. Was it looked for in vain?

**'Olive' Juniper Hairstreak:** This is a fairly conspicuous and widespread hairstreak, corresponding to its wide-spread host, Red Cedar. The summer brood coincides with 4JCs, so the dearth of observations (only 21) in 2009 is significant. The spring brood is inexplicably uncommon, and usually unrecorded in central NJ, while summer broods are recorded mainly in SOM & SUS. The peak count of 3 in 2009 compares with 36 in 2008.

**Hessel's Hairstreak:** Only described in 1950, this species ranges north to Maine, but despite records from Long Island and Westchester, there are no records in our area from MER-MON north. One 2009 OCE record 5/9 at Warren Grove [NABA=1].

**White M Hairstreak:** Only one record in 2009 on 6/7 at ESS: Mills Reservation in Montclair [AB]. Although there were 3 sightings last year and 12 the year before, this is always an uncommon species.

**Gray Hairstreak:** Everyone seemed aware of the decline of the *Satyrrium* hairstreaks (Banded, Striped, etc), while Gray Hairstreak was down as well with only 25 sightings, and a max count of only 3 (7/12 MER:Pole Farm) compared with 19 in 2008. A late 9/20 record from OCE:Toms River [SW2=1].

**Red-banded Hairstreak:** This southerly species was recorded in SUS, MOR, ESS & BER, but hardly in SOM, where it had been fairly common since its invasion in the late 1990s. Very scarce in 2009 with only 11 records (all but one singles) plus 7 Ocean Co records. As in 2008 the first record was in MOR:Mountainside Park but on 5/13 rather than 4/17. Late records 9/10 SOM:Somerset [PW=2] and 9/20 OCE:Tom's River [SW2].

**Eastern Tailed-Blue:** Probably a typical year. Less numerous than in 2008, but not much different from 2007.

**Spring Azure:** Probably typical abundance. *Pearly-Eye 2008* carried an article on the current suggested taxonomy of azures in NJ. Unless one makes a concerted effort to identify individuals to species or at least to color form, it is somewhat arbitrary to divide azure sightings into spring and summer. Our spring-flying Spring Azures tend to be bright blue, while our summer-flying "Summer" Spring Azures are often quite white and moth-like. In the South: six mid-Apr records from OCE identified as Blueberry Azure and four records mid-May through 6/1 OCE:Toms River were reported as Holly Azure [SW2]. Most observers report June and later sightings as Summer Azure.

**ERRATUM:** In my introduction to David Wright's azure taxonomy article (*Pearly-Eye 2008*), I wrote "It has long been known that the "Spring Azure" complex...is not a single species...." At a NABA meeting, J. Glassberg stated that the taxonomy of the azures is not at all settled. I should perhaps have written: "It has long been suspected by some...." Holly Azure could occur in late spring on Coastal Plain (MON) and Cherry Gall occurs at the same time in northwest NJ (D. Wright).

**Summer Azure:** Probably a typical year. A "marginata" form azure was seen on 6/21 SUS:KVSP [JB]. This is a rare variant for Summer Azure, but has been seen occasionally (H. Pavulaan, D. Wright).

**Appalachian Azure:** Records from BER and MOR indicate that this species may be more widespread than previously suspected. This is reflected in increased reports (7 in 2009 vs. 4 in 2008).

**Northern Metalmark:** As in 2008, only four reports: 7/5 WAR:White Lake [JB,MB=13] and 7/12 [WW&SW =20], 7/6 at SUS:KVSP [TH=8], and 7/11 on Springdale 4JC=68. Springdale had 51 in 2007 and 64 in 2008. Over the last eight years of the count, the colony 1 mile N of White Lake (WAR) yielded 27 in 2002, 15 in 2003, 16 in 2004, 73 in 2005, 75 in 2006, 32 in 2007, 39 in 2008, and 59 in 2009. This is suggestive of a real increase. **ERRATUM** in 2008 PEARLY-EYE: The 25+ reported for Vernon were actually on 7/10 in KVSP [TH].

**American Snout:** Only five sightings. 7/12 at MON:Sandy Hook [VC=1] and 2 there on 9/20 [JS]. 8/1 SOM:Somerset [PW=1], 9/2 BER:DeKorte [FK=1] with late report on 11/11 SOM:Negri Nepote [PW=1]. Unlike the two habitat-restricted previous species, this butterfly could appear almost anywhere.

**Variagated Fritillary:** Only two sightings compared with 32 in 2007 and 31 in 2008, plus a 4/27 OCE:Toms River [SW2=1]. All southern strays were scarce in 2009. But if some of the May-June records in prior years represent local or nearby over-

wintering, why would the species virtually disappear after a relatively mild 2008-2009 winter? Maybe lack of snow cover?

**Great Spangled Fritillary:** More observations in 2009 (176) than in 2008 (149) or 2007 (125), but not more numerous. Springdale 4JC had only 344 cf 717 in 2008.

**Silver-bordered Fritillary:** A highly local wet-meadow species. The Mounts Mills, Blue Mtn. Lake, and Crater Lake Rd. colonies persist. A high count of 18 in bog at north end of Blue Mtn. Lake (SUS) was the "all time high count in DWGNRA and possibly anywhere in NJ" (WW&SW).

**Meadow Fritillary:** Fewer observations (26) than in prior years, and nothing approaching the triple-digit counts of 2008 (WAR:White Lake 110 on 4/24/08 [WW&SW,TH] and SUS:Dingmans c200 on 5/4/08 [TS]). Most 2009 reports of 1's and 2's. Max count was 7 on 4/26 at SUS:Hyper Humus [JB].

**Pearl Crescent:** Probably an average or above average year; 195 reports is similar to 2007, but much lower than 2008. First report a rather late 5/6 MER:Mercer Co. Park [HK=3]. Peak 7/12 MER:Mercer 4JC 2084 cf 2826 in 2008.

**Baltimore Checkerspot:** Only 12 records (half that of 2007 or 2008), with a max=27 on Springdale 4JC cf 132 in 2008. Caterpillars first noted on 5/24 SUS:DWGNRA [BS]. Only reported from Sussex Co.

**Question Mark:** Only 37 observations is well below 2007 and 2008. The first on 5/25 was six weeks later than in 2008. This species does not generally overwinter in northern NJ.

**Eastern Comma:** Overwinters as an adult; one of the first early spring butterflies and one of the last flying in late autumn. First on 3/17 was about two weeks later than 2008 first date and last on 10/6 was about two weeks earlier than in 2008, but abundance about equal to 2007 and 2008.

**Compton Tortoiseshell:** Typical numbers, but no March reports, unlike 2008 (and 2010). 1st 2009 brood reported 6/30 to 7/11 then a two month gap to a 9/13 record at SUS:Fredon [WW=1]. A similar gap was apparent in 2007. Does the absence in Aug represent aestivation?

**Mourning Cloak:** Slightly more reports (74) than in 2008 (68) or 2007 (67). Last report 10/25 at SUS:Stokes [JB=1] two weeks later than in 2008.

**Milbert's Tortoiseshell:** No reports in 2009. Recent reports include only one in 2008 at SUS:Vernon AT, three in 2007, two in 2006, and an unprecedented 9 in 2005, all from SUS.

**American Lady:** Fewer reports (114) than in 2008 and 2007. First report on 4/26 was two weeks later than 2008 early report. Only two double-digit days with a peak count of 12 compared with 40 in 2008. Late Sandy Hook record on 10/22 [JB=1] occurred after a gap of 25 days.

**Painted Lady:** A "medium" year with 25 sightings compared with 33 in 2008 and 13 in 2007.

**Red Admiral:** Not a migration year. Far below recent abundance with only 37 sightings plus 3 in OCE. First on 4/26 at SUS:Hyper Humus [JB=1] was a month later than in 2008 and the last sighting was three weeks earlier than 2008, giving a 7 week shorter flight period. No evidence of migration noted, and clearly an off year compared with 2007 (and 2010).

**Common Buckeye:** Only 12 records plus two in OCE is way below recent years. Peak on 9/20 at MON:Sandy Hook [JS=3] then 3 week gap to latest report on 10/11 at SOM:Negri Nepote [PW=1]. Most records from SOM-MON-MER, but one each in SUS and MOR.

**Red-spotted Purple:** Scarcer than in 2007 and about the same as 2008, with 49 reports. Last on 10/6 SOM:Somerset [JB2=1].

**"White Admiral"** Two reports. 6/24:SUS:Crater Lk Rd [JB,MB] "with no apparent introgression of Red-spotted characters" and 6/21 SUS:High Point St. (KF photo) shows "blue band of the Red-spotted Purple rather than the series of red dots along the trailing border of the hind wings"[JB].

**Viceroy:** Scarcer (53 reports) than in 2008 or 2007. First on 5/24 is more than a week earlier than in 2008. Peak count at the SUS:Appalachian Trail area in Vernon was only 8 [VC] compared with 21 in 2008.

**Hackberry Emperor:** This species almost disappeared with only 9 records in 2009 and none from cNJ. Last date 8/19 is a month earlier than 2008 late date.

**Tawny Emperor:** 14 records, twice that of Hackberry. One MON record; the rest in the northwest. This species continues to be unrecorded in MID-SOM-MER-HUN area.

**Northern Pearly-Eye:** Status virtually identical to 2008 and 2007. Recorded only in SUS-WAR-MOR.

**Eyed Brown:** Six reports, all from SUS. 5 from Appalachian Trail area and 1 from Wallkill 4JC. Status essentially the same as in 2008. This species is difficult to identify and photographs allow careful study. It may be overlooked and under-reported if found near the more numerous Appalachian Browns.

**Appalachian Brown:** Status similar to 2007 and 2008. Peak count of 95 on 7/11:Springdale 4JC was nearly twice as high as previous year. Otherwise early, peak, and late dates very similar to 2008.

**Georgia Satyr:** *Three reports from OCE:6/28 Forked River [new location JC=1], Lakehurst Klots Bog, 6 on 7/2 [JS,JZ] ad 1 on 7/4 [SK]. Historic MON record, but non recently.*

**Little Wood-Satyr:** Status similar to 2007 and 2008. Peak flight in late May. Last double-digit day 7/12.

**Common Ringlet:** Many fewer records than in recent years (17) vs. 45 in 2007. Otherwise timing similar to 2008.

**Common Wood-Nymph:** 79 records, as well as early, peak, and late dates are similar to recent years.

**Monarch:** Number of reports (230) similar in percent (5.3%) to prior years. 11/15 date is a month later than in 2008.

**Silver-spotted Skipper:** Relatively more reports in 2009 (4.2%), and more numerous than in 2007. First on 5/14 SOM:Somerset [PM] was 18 days later than record early 2008 date. Abundance similar to 2008. First double-digit day 6/21 SUS:KVSP [JB=16] with 50+ seen there 6/27 [TH]; also 7/5 KVSP [45+] and 8/15 MOR:Willowood [TH 50+]. Last seen on 10/9 SOM:Somerset [MG=1].

**Long-tailed Skipper:** Only one sighting MER:Plainsboro Preserve 8/31 [HK] compared with four reports in 2008.

**Hoary Edge:** 14 sightings in 2009 compares with only 6 in 2008 and 19 in 2007. No unusual dates. No OCE reports.

**Southern Cloudywing:** Less numerous than in prior years. Only 3 sightings, all at SUS:Flatbrookville from 6/24 [JB,MB=13] TO 7/8 [TH=3], along with some unidentifiable Cloudywings on the same dates. Also OCE: 6/19 Colliers Mills & Lacey Twp [DA=1 at each site]. Another species that may get under-reported because of the more common Northern Cloudywing.

**Northern Cloudywing:** Generally more commonly reported than Southern Cloudywing. No change in frequency from prior years. Several double-digit days in North. Most records from HUN & MOR north, except two from SOM and one from MER.

**Dreamy Duskywing:** Only 8 sightings for this local species, but a respectable max of 33 on 5/30 MOR:Wildcat Ridge [JS].

**Sleepy Duskywing:** Fairly common in Pine Barrens, but uncommon and local in northern NJ with only one record 4/27 SUS:Crater Lk Rd [JB,MB=1]. No reports in 2009 from HUN:Milford Bluffs.

**Juvenal's Duskywing:** Probably normal abundance with 42 reports in 2009 and 39 in 2007, compared with 75 in 2008. Only double-digit day on 5/13 MOR:Mountainside Park [TH=12].

**Horace's Duskywing:** Only 11 sightings compared with 28 in 2008 and 46 in 2007. One May record for this species, which is likely to be overlooked among the Juvenal's Duskywings. Conversely, since Juvenal's is "known" to be single-brooded, summer records are automatically attributed to Horace's. Max count only 2 compared with 13 in 2008.

**Wild Indigo Duskywing:** Compared with previous years, 2009 reports were down by almost half (41 vs. 62 in 2008). Only four double-digit days, with peak of 56 on 7/18 SOM-MID: Raritan 4JC. With widespread planting of Crown Vetch, its main NJ host, along highways, this species increased dramatically in the 1980s and 1990s. As Crown Vetch gets over-grown by other vegetation, we may expect further declines. As another vexing identification problem, this species reportedly also uses Wild Indigo and Lupine (hosts of Persius Duskywing) and even



Columbine (host of Columbine Duskywing). Both of these butterflies are probably indistinguishable in the field or even with photographs from Wild Indigo Duskywing. Neither has been reported from NJ in the past 50 years. Records of either from before the description of Wild Indigo Duskywing in 1936 are questionable.

**Common Checkered-Skipper:** Far fewer reports in 2009 (12) compared with 2008 (40) and 2007 (34). Its mallow hosts are very common and widespread, but the butterfly is not. Rutgers Rt. 1 colony site has become overgrown and is no longer suitable. The MER:Stony-Brook Organic Farm colony persists, but was less reliable, due to more-intensive weeding practices removing much of its mallow host [SM]. SOM:Negri Nepote continues as a stronghold with 10 (highest count) on 10/4 and 6 on 10/11 (latest date) [PW]

**Common Sootywing:** Continues to be uncommon with only 8 reports. No unusual dates or numbers. Max count of only 2. Its host, Lamb's Quarters (*Chenopodium album*) is widespread and common, but the butterfly is generally much less numerous than 20 years ago.

**Arctic Skipper:** No records in 2007, 2008, 2009. Few attempts were made to locate it in High Point SP.

**Swarthy Skipper:** Status probably normal. 8/8 observation of 200+ at MON:Big Brook Park [KK] supports this site's reputation for astounding numbers. A 2005 record was 500+. In MON and OCE, this species can be common in old Cranberry bogs. Only 2 OCE reports in 2009: 6/19 Klots Bog nectaring on Cranberry[DA=5] and 6/23 Forked River [CS&JD=3]. Uncommon in northwest NJ where it occurs in dry habitats where its only documented host, Little Bluestem, is common [SW].

**Least Skipper:** About as common as two previous years. Double-digit days all in northern counties, with max of 51 on 7/11 on Springdale 4JC, well below the max of 100+ in 2008. Lack of prolonged gaps (greater than one week) throughout season precludes identification of particular broods.

**European Skipper:** 21 reports in 2009 and 22 in 2008 compared with 32 in 2007. Peak count on 6/7 MOR:Schooley Mtn [JS=40] compares with "100's" for the 2008 peak on 6/19 MON:Big Brook [VC].

**Fiery Skipper:** Only three singleton records from 7/18 to 10/9. compared with 27 in 2008 and 29 in 2007. We were getting the illusion that this formerly uncommon late summer, southern stray might be getting "established" in NJ.

**Leonard's Skipper:** This species of Special Concern is highly localized, with few known populations. The SOM: Somerset Farms colony was eliminated by an abortive development. Only four reports in 2009, three of them from SUS:Fredon (Wander's yard), and one from the SUS:KVSP Butterfly garden. This is our only resident, late-summer, single-brooded species. "More common and widespread than reported, though no sites in north Jersey support more than 5 or 6 individuals"—[WW]. About 15 sites have been documented in previous Pearly-Eyes "all of which support only a few individuals" [SW]. Its NJ status should

be upgraded to "threatened" and a concerted effort should be devoted in late summer to documenting its occurrence. [MG].

**Cobweb Skipper:** Only two records in 2009, probably doesn't reflect a status change, since due to bad weather there were generally few field reports for the period when this species normally flies.

**Dotted Skipper:** There are no historic records for MER-MON northward. Only one 2009 report in Ocean. 6/19 Colliers Mills [DA=1]. Up to 20 have been recorded there on Lakehurst 4JCs (not run in recent years).

**Indian Skipper:** Again the paucity of records (10), only half that in 2008, probably reflects the bad weather during this species' flight period. As in 2008 the earliest record (5/13/09) was at MOR:Mountainside Park. [TH=1].

**Peck's Skipper:** 110 sightings in 2009 very similar to 2007 (107), but well below 2008 (155). But 400+ on 8/8 at MON:Big Brook Park [KK] was certainly unusual. Earliest record 5/18 SOM: Somerset [PW=1], same location as 5/13/08 first sighting. First brood in late May with double-digit days from 5/31 to 6/7. Then single digits almost continuously until as second brood in early Aug. Additional sporadic records in mid-Aug, mid-Sept and Oct, which may not represent distinct broods.

**Tawny-edged Skipper:** Status similar to 2007 (42 records vs 57), but far fewer reports than in 2008 (82). Three double-digit days, with max=15 on 6/30 MOR:Schooley Mtn [AK].

**Crossline Skipper:** Status slightly less numerous (13 reports) than in 2007 (24) and 2008 (20). No June records in 2009. This species is often difficult to identify with confidence. It does not seem to be over-reported, and may be under-reported.

**Long Dash:** Probably normal status with 11 reports compared with 11 in 2007 and only 2 in 2008. A localized wetland species.

**Northern Broken-Dash:** Probably less numerous in 2009 (43 reports) compared with 58 in 2007 and 63 in 2008. In the 1990s this used to be one of the commonest skippers, at least in central NJ.

**Little Glassywing:** Similar number of reports all three years. Main flight period 6/14-7/27. Two Aug records except in OCE:Toms River with latest on 8/16 [SW2=2].

**Sachem:** Much less numerous in 2009 (46 reports) than in 2008 (111) and 2007 (86). Only one May record 5/18 SOM:Somerset [PW]=2, then none until mid-July, 7/12 MER:Mercer 4JC=2. First double-digit day 7/18 SOM-MID:Raritan 4JC=45. Only one triple-digit day 9/24 SOM:Somerset Farms [MG]=100+. But triple digits at OCE:Toms River on 9/5 and 9/7 (SW2 with max=157). 80% of records are Aug to Oct, reflecting immigration from the south, as in most previous years. The May records in 2008 and 2009 suggest local over-wintering.

**Arogos Skipper:** Endangered in NJ and highly localized. Two reports from known Morris County colonies on 7/7 at Kenvil (Roxbury Twp) [TH=1] and 7/7 Randolph Twp [WW&SW=5]. (See details on pp 12-13).

**Delaware Skipper:** Proportionately similar number of reports as in 2007 and 2008. No unusual dates or numbers. Continuously present from first sighting 6/21 through July, with obvious peak in 2nd week of July. Three-week gap to final sighting 8/20 SUS:Flatbrook [FW=1].

**Mulberry Wing:** Proportionately similar number of reports as in 2007 and 2008. No unusual dates or numbers. Peak of 26 on 7/18 Raritan 4JC all in Middlesex County sites [JS].

**Hobomok Skipper:** Probably a typical year 2009 (39 reports) compares with 55 in 2008 and 47 in 2007.. Unusually late record on 7/30 BER:Weber Yard is 20 days later than previous late record and was noted to be "surprisingly fresh for this late date" [FW]. This was the only species with a record late occurrence date in 2009.

**Zabulon Skipper:** Remarkably scarce, with half as many reports (49) in 2009 compared with 2007 (94) and 2008 (95). Reported continuously (mainly singletons) from 5/21 to 6/28 throughout region. Then mid-July records 7/12 MER:Trenton Marsh [CL,ML] and 7/12 OCE:Toms River [SW2] followed by a gap until 8/8. 73% of reports were from the Aug-Sept brood.

**Broad-winged Skipper:** Status similar to 2008, but far fewer reports (25) than in 2007 (47). First noted 7/12 OCE:Cattus Is. [SW2=1], then 7/19 BER:Hackensack Env. Center [FW,DB=40] (also the max count). Another surge in double digits between 8/9 and 8/14. Phragmites is so widespread that one would expect more reports for this conspicuous skipper.

**Dion Skipper:** This much-sought-after marsh skipper remained elusive in 2009 (5 reports) compared with 6 in 2008, and 18 reports in 2007.

**Black Dash:** Somewhat fewer records in 2009. Compared with, 2008, earliest record was a month earlier on 6/27 SUS:Vernon AT [HK=1] and last report was two weeks later 8/10 SUS:KVSP

[TH=1]. All but three records in SUS. Continues to occur at MID:Monroe Gasline on Raritan 4JC [JS].

**Two-spotted Skipper:** Only two reports: OCE:Lakehurst Klots Bog 6/19 [DA=1] and 7/2 [JB,JZ=1]. This is a northern species which is, nonetheless, surprisingly scarce in North Jersey with no records in past two decades or more. Tussock Sedge, one of its hosts, is widespread. Also found at BUR:Parker Refuge.

**Dun Skipper:** Similar frequency to 2007. No unusual dates or numbers. Single digits from 6/12 to 7/8 then peak counts on 4JCs (7/11 & 7/12). Thereafter single digits until 7/30-8/1, with an obvious 2nd brood in Aug. Three week gap from early Sept, to sightings in MON, MID, SOM on 9/20 & 9/21.

**Dusted Skipper:** Probably a typical year for this short-lived, localized, spring-flyer. Four reports from two locations MOR:Wildcat Ridge WMA [5/20 JB=2] and [5/30 JS=4] and from Flatbrookville [5/21 JB=1] and [5/24 JB,MB=2].

**Pepper and Salt Skipper:** Only two reports 5/31 HUN:Bethlehem Twp [JS,CW]=3 and 6/7 SUS:High Pt [NABA=11]. This species has been regularly found at High Pt nectaring on Wild Geranium. ERRATUM: In the *Pearly-Eye 2008*, the Bethlehem Twp site is erroneously listed in Sussex County.

**Common Roadside-Skipper:** As in 2008, only one report of this elusive little skipper. 5/22 SUS: Appalachian Trail between Mohican & Raccoon. Ridge [JS=2]. None along the AT from Catfish Gap to Raccoon Ridge on 5/30 [JB].

*Salt Marsh Skipper: This species is abundant (often triple digits) from Atlantic Co southward with historical records from Ocean, Middlesex & Essex Counties as well as Staten Island and Long Island. No records from our area in recent decades, but should be sought on edge of salt marsh.*

**Ocola Skipper:** No 2009 or 2008 reports.

**2009 Contributors:** The following people contributed sightings and are indicated by bracketed initials in the text & table. D.Amadio [DA], J.Arkin [JA], P.Bacinski [PB], F. Bader[FB], M.Barrett [MB], A.Baytas[AB],J.Beetham [JBe], D.Blinder [DB], C.Blumig [CB], J.Burgiel [JB], J.Burger [JB2], J.Connor [JC], V.Corsello [VC], M.Dormont [MD], J.Dowdell [JD], D.Burnside [DB], K.Foord [KF], L.Gangi [LG], M.Gochfeld [MG], T.Halliwell [TH], C.Herz [CH], J.Hurwitz [JH], T.Jawidzik [TJ], F.&J. Kahan [FK], K.Keating [KK], S.Keller [SK], W. Kerlinger [WK], H.Kindervatter [HK], A.Koster [AK], C&M Leck [CL], S.Lee [SL], J.McKee [JM], E.&G.Mahler [EM], C.Mayhood [CM], D.Miranda [DM], S.Mitchell [SM], B.Murray [BM], P. Murray [PM], G.Nixon [GN], F&P.Pfeiffer [FP], M.Pollock [MP], R.Radis [RR], S.Richart [SR],K.Risdon [KR], J.Rottkamp [JR], D.Schulman [DS], J.Scott [JSc], B.Sendelbach [BS], J.Springer [JS], T.Sudol [TS],F.Sullivan [FS], C.Sutton [CS], P.Sutton [PS], K.Swaine [KS], C.Vogel [CV], T.Vogel [TV], S. Wainwright [SW2], S.Wander [SW], W.Wander [WW], E.Washburn [EW], D.Wentink [DW], F.Weber [FW], C.Williams [CW], P.Williams [PW], K.Witkowski [KW], J.Wright [JW],C.Wyluda [CWy].

ABBREVIATIONS: AT=Appalachian Trail, KVSP=Kittatinny Valley State Park  
| DWGNRA=Delaware Water Gap National Recreation Area

## HIGHLY LOCALIZED SPECIES

Many of our butterflies can reasonably be expected in a variety of locations and habitats. Some, however, have to be sought in particular locations, where only one or a few "colonies" occur. These include, among others: Checkered White, Bog Copper, Henry's Elfin, Northern Metalmark, Silver-bordered Fritillary, Harris' Checkerspot, Arctic Skipper, and Arogos Skipper. It is noteworthy if a search of a known colony fails to find such species. Table 2 prepared by Sharon Wander lists some of these noteworthy species that merit special searching or attention in 2010. -**M.Gochfeld**

The table below is intended to encourage enhanced searching for--and reporting of--species that we think of either as relatively common but with surprisingly few recent reports (apparently declining species) or as localized species that may occur in other, still unknown, sites. Some such as Edward's Hairstreak are hostplant-restricted, and others such as Common Sootywing have a host that is very widespread. Also included are several species not seen in recent years (such as Acadian Hairstreak, Harris' Checkerspot, Arctic Skipper), for which we hate to give up hope that they're still with us **Sharon Wander**

### BUTTERFLY SPECIES TO TRACK IN 2010 by Sharon Wander

SPECIES	# REPORTS IN 2009 PEARLY - EYE	FLIGHT PERIOD	KNOWN NORTH/CENTRAL JERSEY LOCATIONS
	# of individuals may be greater than # of reports	Record early & late dates from Table 1 in 2009 Pearly-Eye	As reported in 2009 and earlier Pearly-Eyes
HARVESTER	13 (most from 1 location)	5/14-10/20	MOR: Brookside Park; Dismal Harmony Nat. Area and Schooley Mtn; SOM: Sherman-Hoffmann (none in 2009);
BRONZE COPPER	0	6/6-9/4	Erratic: SUS: AT Lands, Vernon; Flatbrookville; Paulins Kill WMA-Frankford; poss Wallkill NWR
BOG COPPER	1	6/22-7/9	MID: Jamesburg County Park (aka Helmetta); SUS: Mashipacong Bog (not public)
CORAL HAIRSTREAK	7	6/8-8/5	Erratic. MON: Big Brook, Sandy Hook; MOR: Schooley's Mt., Willowood? SUS: DWGNRA;
ACADIAN HAIRSTREAK	NONE (SINCE 2005)	6/29-7/12	SUS: fens (e.g., Sparta)
EDWARDS' HAIRSTREAK	4 from 2 locations	6/15-8/2	SUS: Crater Lake Rd., Stickels Pond Rd, Hamburg Mt., Sunrise Mt., KVSP, AT above Mecca Lake; WAR: Yard's Creek
STRIPED HAIRSTREAK	4	6/16-8/24	Erratic. BER: Flat Rock Brook; MOR: Schooley's Mt.; SUS: Crater Lake Rd., High Point SP
EASTERN PINE ELFIN	4	4/17-6/8	MID: Cheesequake SP; MON: Allaire? SUS: Crater Lake Rd., Flatbrookville, Walpack
APPALACHIAN AZURE	7	5/5-6/30	HUN: Mt. Cushetunk, Tower Hill Res.; MER: Baldpate Mt.; SUS: Culver's Gap area; SOM: Sourlands? 2009 records from BER, MOR.
SILVER-BORDERED FRITILLARY	10	5/7-9/27	MER/MON: Assunpink? MID: Jamesburg Co. Park, Mounts Mills gas line; Monroe gas line, Pigeon Swamp? MON: Englishtown gas line, Monmouth Battlefield SP? Owl Haven? OCEAN: Butterfly Bogs? SUS: Crater Lake Rd., Blue Mt. Lake
HARRIS' CHECKERSPOT	NONE (SINCE 2003)	6/11-6/23	Formerly MOR: Arven Meadow (Rockaway Twp.), Lake Denmark? Troy Meadows?; SUS: Ogdensburg; UNI: Passaic River Park (Summit)
MILBERT'S TORTOISESHELL	0	4/10-11/21	Erratic. SUS: Silver Spray Farm, occ. elsewhere in DWGNRA; AT Lands & Wallkill NWR, Vernon.
HOARY EDGE	14	5/22-7/21	Erratic. MOR: Mountainside Park; PAS: Ringwood SP; SUS: KVSP, AT Lands Vernon
SLEEPY DUSKYWING	1	4/13-6/1	HUN: Milford Bluffs (none in 2009); SUS: found on Crater Lake Rd. in 2009; High Point SP?
COMMON SOOTYWING	8	4/30-9/19	Erratic. BER: Meadowlands; MON: Assunpink; SOM: Negri Nepote; SUS: Hyper Humus, DWGNRA, Bear Swamp
ARCTIC SKIPPER	NONE (SINCE 2005)	5/20-6/21	SUS: Stokes SF
LEONARD'S SKIPPER	4	8/11-9/28	Erratic. SUS: KVSP, Vernon AT Lands, Flatbrookville
COBWEB SKIPPER	2	4/24-6/11	MON: Thompson Park; MOR: Mountainside Park, Boonton; SUS: Flatbrookville
LONG DASH	9	5/24-7/8	MOR: Willowood, Mendham; Schooley Mtn.; SUS: Vernon AT Lands, High Point/Stokes SF, Flatbrookville, Swartswood, Walpack; WAR: White Lake.
AROGOS SKIPPER	2	6/30-8/2	MOR: Kenvil (only accessible colony)
DION SKIPPER	5	6/20-8/8	MID: Pigeon Swamp & Helmetta; SUS: Hyper Humus, Whittingham,
DUSTED SKIPPER	4	5/13-6/20	MOR: Mountainside Park, Wildcat Ridge; SUS: KVSP, Flatbrookville
PEPPER AND SALT SKIPPER	2	5/19-6/21	HUN: Bethelhem Twp.; SUS: High Point SP
COMMON ROADSIDE-SKIPPER	1	5/14-8/1	MON: Allaire SP; WAR: Yard's Creek (not open to public), Raccoon Ridge, AT near Camp Mohican

Editors Note: The above list does not include a several categories of rarely encountered species: 1: irruptive southern species that may be absent in any give year but could turn up anywhere, such as Little Yellow, Long-tailed Skipper, Ocola Skipper. 2) formerly resident species that have not been documented at all or only reported once in New Jersey in the past decade: Silvery Checkerspot, Mitchell's Satyr, Mottled Duskywing, Appalachian Grizzled Skipper. 3. Vagrants such as Queen and Monk Skipper.

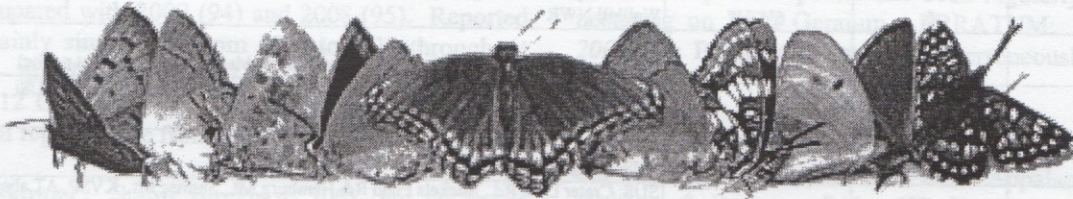
## BUTTERFLIES AND MOTHS OF NORTH AMERICA

Readers who are curious about the status of any of our Butterflies (and many moths for that matter) can consult the BAMONA web site.

<http://www.butterfliesandmoths.org/>

Enter a species name in the search window which will leads to an individual species account, photograph and a map of the U.S. Range (by county).

Despite being identified as "North American", only U.S. County locations are charted at this time. You can then select maps for particular states, see the NJ map for Arogos skipper (on the next page). The maps do not, at this time, distinguish between currently verified occurrence and historic occurrence, but even the history is worth noting.



### *Butterflies and Moths of North America*

Occurrence maps, species accounts, checklists, and photographs



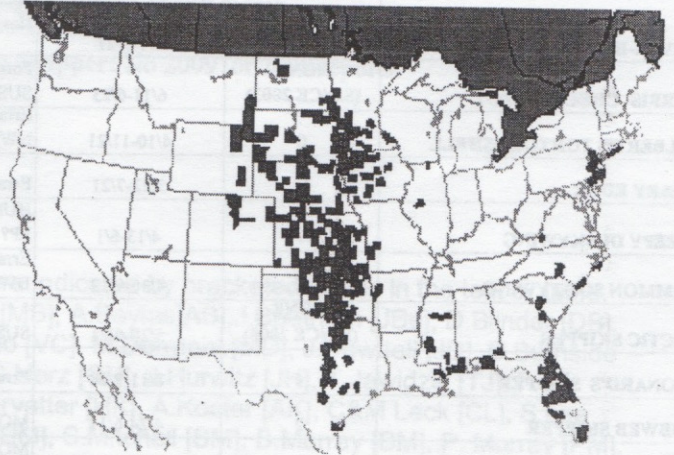
Home

Arogos

← ENTER SPECIES NAME HERE

#### Site Navigation

- Taxonomic Groups
- Map Search
- Species Search
- Image Gallery



FOR EXAMPLE LETS LOOK AT

#### Arogos Skipper

*Atrytone arogos* (Boisduval & Leconte, [1837])

↑  
United States Distribution of Two Subspecies of Arogos Skipper

## NEW JERSEY DISTRIBUTION OF AROGOS SKIPPER



There is also detailed information on each species, for example:

**Family:** Skippers (*Hesperiidae*)

**Subfamily:** Grass Skippers (*Hesperiinae*)

**Identification:** Upperside is yellow-orange with black borders which are wider in females. Underside of hindwing is yellow with paler veins

**Life history:** To wait for receptive females, males perch on low vegetation near host plants in the afternoon. Females deposit eggs singly under host plant leaves. Caterpillars feed on leaves and live in tents of two leaves silked together. Fourth-stage caterpillars hibernate, complete their feeding the next spring, and pupate in a leaf cocoon in vegetation about 3 feet above the ground.

**Flight:** One brood from June-July in the north and west; two broods from April-September in the south.

**Wing span:** 1 1/8 - 1 7/16 inches (2.9 - 3.7 cm).

**Caterpillar hosts:** Big bluestem (*Andropogon gerardi*) and probably other native grasses.

**Adult food:** Nectar from flowers of purple vetch, Canada thistle, dogbane, stiff coreopsis, purple coneflower, green milkweed, and ox-eye daisy.

**Habitat:** Relatively undisturbed grasslands, prairies, sand prairies, and serpentine barrens.

**Range:** Occurs in isolated colonies Georgia; peninsular Florida; the Gulf Coast; southeast North Dakota and

central Minnesota south to South Texas; and the Colorado front range. Strays to west Virginia, northern Arkansas, and Illinois.

**Conservation:** Populations in Iowa and Minnesota have been greatly reduced. All populations should be protected.

**NatureServe Global Status:** G3 - Very rare or local throughout its range or found locally in a restricted range (21 to 100 occurrences). (Threatened throughout its range).

**Management needs:** Care should be taken not to extirpate populations through the use of fire as a management tool.

### ADDITIONAL NOTES ON AROGOS SKIPPER

This is basically a prairie species that has declined widely. It does NOT have federal listing status. Xerces Red List Status: Vulnerable and is listed as endangered in IL, NJ, NY and threatened or special concern in IA and MN.

The Arogos Skipper is scattered in isolated populations across much of the United States east of the Rockies, however it is in severe decline in almost its entire range. The eastern subspecies, *A. a. arogos*, has disappeared from most of its recorded locations east of the Mississippi and is barely surviving at the remaining locations. The current stronghold for this subspecies is New Jersey, where it is state-listed as Endangered. The western subspecies, *A. a. iowa*, is faring better, especially in the southern parts of its range, but cannot be considered secure. Overall, the population decline has been estimated as "99- 100% in most parts of the range" (NatureServe).

Prairies everywhere have been destroyed or fragmented by agricultural and urban development. Remaining prairies continue to be threatened by agricultural conversion, grazing, and pesticide applications. Management of prairies is also an issue because this butterfly appears to be more sensitive to fire than some other prairie-dependent species. Fire has impacted populations of Arogos Skipper, and in some places it is known to have caused local extirpation. Fire rotations of two years or less appear to severely impact this butterfly. Fire rotations of three years or greater have less impact.

The butterfly's prairie and grassland habitats must be protected from development or conversion and management of remaining prairie should be done to minimize the impact of management actions on the butterfly. This applies to the New Jersey sites as well.

**NOTE:** The BAMONA website and data base are regularly updated as new records are submitted. At present the record keeping is on a county-basis, but as new records with GPS-coordinates are submitted, finer scale mapping may be possible in the future.

**South Jersey Butterfly Log Results, 2009**  
Jack Connor, Port Republic NJ.

Our second year of gathering butterfly reports on a shared Google spreadsheet drew a total of 8000 observations from approximately 50 observers. We found 99 species in the state's southern eight counties. Total observations were up (from approximately 6000 observations in 2008), but so were the number of participants, and the consensus seemed to be that 2009 was a "down year" for many species, especially April through June. The wet, cool spring seemed a primary culprit. Was it too cold for caterpillars to feed effectively? Milkweeds bloomed abundantly in June and into July, but they were frequently empty of butterflies. Coral, Banded, and Striped Hairstreaks seemed conspicuous by their general absence. Swallowtails also seemed generally down, at least through the first half of the year. Monarch numbers were probably about average.

The year's notable finds included a very early Frosted Elfin (3/31/09, Lizard Tail Swamp, Will Kerling) a Common Roadside Skipper (5/13/09, Dennisville, Kerling), five different reports of Northern Oak Hairstreak (6/10-6/28), three records of Edwards' Hairstreak (6/25-7/1, Pat & Clay Sutton, *et al*), four widely-spaced observations of Great Spangled Fritillary (6/23-9/19), one Bronze Copper (9/7/09, Mannington Marsh, Dave Amadio), two records of Giant Swallowtail (9/20 and 9/25), and a very late Summer Azure (11/3/09, Cape May, Louise Zemaitis). After three years of numerous observations, Dotted Skipper and Two-spotted Skipper can now be considered expected species in mid- to late June at Franklin Parker Preserve in Chatsworth (Stephen Mason *et al*).

Species found at only one or two locations and to be looked for elsewhere in future years included Hoary Elfin (only at Warren Grove), Mulberry Wing (only Tuckahoe River, 7/5-7/16), Dion Skipper (only Parker Preserve, 8/3-8/18), and Leonard's Skipper (11 of 12 observations at Manumuskin River Preserve, 8/24-9/19).

Georgia Satyr (two reports of single individuals in June), European Skipper (only two reports, both June) and Long-tailed Skipper (no reports) seemed scarcer than in recent years. The fall flight of southern strays was mediocre at best. We had no reports of either Fiery Skipper or Ocola Skipper north of Cape May County. The one remarkable southern stray reported north of Cape May County was a Sleepy Orange found in Salem County (10/20/09, Brian Johnson).

Despite the less-than-ideal weather, which limited observations in spring and also during several rainy periods later in summer, we recorded butterflies in all months but January, including two species in February (Mourning Cloak and Question Mark) and eight in December (Orange Sulfur, Cloudless Sulfur, Variegated Fritillary, American Lady, Painted Lady, Red Admiral, Common Buckeye, and Monarch). The last adult butterfly seen was an Orange Sulfur on 12/9/09 at Cape May (W. Kerling).

Anyone interested in participating in our 2010 South Jersey Butterfly Log can email me at [nacotejack@gmail.com](mailto:nacotejack@gmail.com). Jack Connor

**IS IT TIME FOR A NORTH JERSEY ELECTRONIC LOG OR SPREADSHEET**

The continued success of the South Jersey Log (8000 entries in 2009) suggests that this would be a good approach for North Jersey as well. This is an on-line spreadsheet which allows people to send their records directly to the spreadsheet and see records that others have posted.

The question is would NABA-NJ members enter their data on a web-based spreadsheet, or would they find it easier to send notes to a compiler in periodic emails----the way it's done now. The advantage of the log is that readers can see what others have been reporting.

Jack Connor manages the South Jersey Log. Here's how it works:

1. Open a Google Account.
2. Open a Shared Google Doc Spreadsheet.
3. Invite observers to open their individual accounts and log-on.
4. Jack serves as a gate-keeper, authorizing people individually to access the log.
5. There is also a no gate-keeper option which allows anyone anywhere to view and add to the spreadsheet.
6. There may also be a no-tamper option available.

## 4th of July Butterfly Counts - 2009

	Sandy Hook (6/25)	Great Swamp (7/4)	Greenbrook (7/10)	Springdale (7/11)	Mercer Co. (7/12)	Walkill (7/12)	Raritan (7/18)	Duke Farm (7/25)
Pipeline Swallowtail			1					
Black Swallowtail	1			4	51	17	93	12
Eastern Tiger Swallowtail	2	5		7	11	1	14	6
Spicebush Swallowtail	1	1		4	1			
Cabbage White	101	208	8	299	340	145	381	270
Clouded Sulphur	4	68		150	76	174	45	17
Orange Sulphur	20	102		87	253	64	191	84
Harvester		1						
American Copper	18	1		78		2	1	
Coral Hairstreak	6						2	
Edwards' Hairstreak				10				
Banded Hairstreak	1	7	1	7		30		
Striped Hairstreak		5						
Juniper Hairstreak							2	1
White M Hairstreak								
Gray Hairstreak		1			5		3	1
Red-banded Hairstreak	1							
Eastern Tailed-Blue	26	91		69	77	19	32	28
"Summer" Azure	21	20	1	9	15	1	6	3
Northern Metalmark				68				
Variegated Fritillary	1							
Great Spangled Fritillary		96		344	47	68	18	2
Silver-bordered Fritillary				1				
Meadow Fritillary				4				
Pearl Crescent		57		83	2084	199	713	180
Baltimore Checkerspot				27		12		
Question Mark	6	1		2		3		6
Eastern Comma		9	2	28	1	15	1	1
Compton Tortoiseshell				1				
Mourning Cloak	1	1		3	3	1		1
American Lady	3	10		10	3	1	4	1
Painted Lady	2	1			5	1	1	
Red Admiral		6		3	2	1	1	5
Common Buckeye		3			1			
"Red-spotted Purple"			1	6	3		8	5
Viceroy					3		4	
Hackberry Emperor								
Tawny Emperor	1			11		1		
Northern Pearly-Eye		3		58		9		
Eyed Brown						2		
Appalachian Brown		34		95	3	23	6	
Little Wood-Satyr	25	260	63	134	68	15	7	
Common Wood-Nymph		97		187	199	134	29	3
Monarch	17	89		203	69	60	68	23
Silver-spotted Skipper	51	49		77	22	9	2	4
Hoary Edge	13			9				
Southern Cloudywing	4							
Northern Cloudywing				1	1			
Horace's Duskywing		2			2		1	
Wild Indigo Duskywing				1	8		56	3
Common Checkered-Skipper				1	8		2	
Common Sootywing						1		1
Swarthy Skipper	7							
Least Skipper		143		51	13	19	4	4
European Skipper	1	21		11		2		
Peck's Skipper	1	7		2	3		1	5
Tawny-edged Skipper	3	1			1			1
Crossline Skipper	1	1		6		2		
Northern Broken-Dash	1	84		41	56	4	6	1
Little Glassywing	21	340		142	64	35	3	
Sachem					2		45	1
Delaware Skipper		38		90	8	40		
Mulberry Wing		2		6			26	
Hobomok Skipper		2						
Zabulon Skipper		2			1			
Broad-winged Skipper								
Dion Skipper		4		3		2	5	
Black Dash		7		38	1	3	16	
Dun Skipper	3	48		54	22	9	5	
TOTAL SPECIES	31	42	7	46	38	36	36	27
TOTAL INDIVIDUALS	364	1928	77	2525	3532	1124	1802	669

The Pearly-Eye 2009 is a publication of the NABA North Jersey Butterfly Club, a chapter of the North American Butterfly Association Inc.(NABA). It is intended to highlight activities of the club and to provide an overview of the status of butterflies in central and northern New Jersey in 2008 (from Mercer and Monmouth counties north). Editor-Michael Gochfeld (54 Hollywood Avenue, Somerset, NJ 08873). gochfeld@eohsi.rutgers.edu

The Club meets on the first Tuesday of the month (except in July when there is usually no regular meeting and in November when it meets 2<sup>nd</sup> Tuesday) at 7:30 pm in the Haggerty Education Center of the Frelinghuysen Arboretum, 53 East Hanover Avenue, Morristown, NJ. A list of field trips, directions to meetings, and other useful information can be found on the chapter's website at <http://www.naba.org/chapters/nabanj/> (click on chapters).

The officers for 2009-2010 are  
 Joe Burgiel, president (burgiel@alum.mit.edu)  
 Charlie Mayhood, Vice-president (cbird151@optonline.net)  
 Deedee Burnside, treasurer (deedeeburnside@optonline.net)  
 Alice Koster, secretary (ajkoster@aol.com)

Membership in the NABA-North Jersey Butterfly Club is included with annual membership in the North American Butterfly Association. (NABA Membership Services, 4 Delaware Road, Morristown, NJ 07960 or go to website: <http://www.naba.org> for further information

**2009 NABA-NORTH JERSEY Meetings and Field Trips MEETINGS 2009**

- Jan & Feb.. Meeting Cancelled Due to Snow.
- Mar 3: Butterflies of Peru, Rick Cech.
- Apr 7: Butterfly Gardens, Lynn Lussier.
- May 5: Butterflies and Other Critters in the Pantanal and Iguassu Falls, Charlie Mayhood.
- June 2: Butterflies of Mexico and Costa Rica, Ahmet Baytas.
- Aug 4: Butterflies of the Arabuko-Sokoke Forest in Kenya and Other Safari Highlights, Patti Murray.
- Sept. 1: It's A Bug, Bug, Bug, Bug World (or, Oh Gross, Does It Bite?), Wade Wander.
- Oct 6: Where In The World Is That Butterfly?, Marge Barrett.
- Nov 10: Spring Along the Appalachian Trail in Vernon, Tom Halliwell.
- Dec. 1 Member's Night

**FIELD TRIPS 2009**

- May 3, Sandy Hook, Leader Chris Williams
- May 9, Pine Barrens, Leader Jim Springer
- May 17 Walpack Area, Sussex County, Tom Halliwell
- June 7 High Point, Joe Burgiel
- June 27, Appalachian Trail Lands, Vernon, Sharon & Wade Wander
- July 18, Karen Nash Memorial Garden, Washington, Warren County, Tomas Gonzales
- Aug. 9, Hackensack Meadowlands, Charlie Mayhood
- Aug. 15, Willowood Arboretum, Fairview Farm, Morris and Somerset Counties, Tom Halliwell
- Aug. 22, NABA Barbecue, Fred and Patti Pfeifer