Volume 55, Number 1 Spring 2013

NEWS OF THE LEPIDOPTERISTS' SOCIETY

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Volume 55, Number 1
Spring 2013

The **News of the Lepidopterists' Society** (ISSN 0091-1348) is published quarterly by The Lepidopterists' Society, c/o 735 Rome Drive, Los Angeles, CA 90065-4040, and includes one or two supplements each year. The **Season Summary** is published every year as Supplement S1 and is mailed with issue 1 of the News. In even numbered years a complete **Membership Directory** is published as Supplement S2 and is mailed with issue 4 of that volume of the News. Please see the inside back cover for instructions regarding subscriptions, submissions to, and deadline dates for, the News.

Periodicals Postage paid at Los Angeles, CA and at additional mailing office (Lawrence, KS).

POSTMASTER: Please send address changes to **News of the Lepidopterists' Society,** c/o 735 Rome Drive, Los Angeles, CA 90065-4040.

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Issue Date: March 1, 2013

ISSN 0091-1348
Editor: James K. Adams

Front Cover:

Mating *Euchloe olympia,* May 3, 2009, West Beach, Indiana Dunes National Lakeshore, Porter County, Indiana. (photo by Jeffrey E. Belth, see Book Review, pg. 44)

Range expansion of Zabulon Skipper, *Poanes zabulon* (Boisduval & LeConte [1837]) (Hesperiidae) in Massachusetts

Sharon Stichter

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Changes are taking place in the distributions of many butterflies and moths as climate warming becomes a reality (Parmesan *et al*. 1999, for example), but more research is needed (Caldas, 2011). Shifts in the species composition of the butterfly fauna of one state, Massachusetts, over the past 20 years have been recently demonstrated (Breed *et al*. 2012): many southern-based species are being seen more frequently and several northern-based species appear to be in decline. This note presents one example of a species which has expanded its range northward into Massachusetts in the past 35 years, establishing new over-wintering colonies where none were known previously.

Prior to the 1930's, the status of Zabulon Skipper *Poanes zabulon* (Boisduval & LeConte, [1837]) (Hesperiidae) in Massachusetts cannot be determined because early lepidopterists like Samuel Scudder regularly confused it with *Poanes hobomok* (T. Harris, 1862). By the 1950's there may have been some Zabulon Skippers in southwestern Massachusetts along the Connecticut River, and the species was certainly known in southern Connecticut. Maps in Klots (1951: 251) and Opler and Krizek (1984: 245) show the Massachusetts border as the northern edge of this skipper's range. But there appear to be no Massachusetts museum specimens or other literature reports prior to 1988.

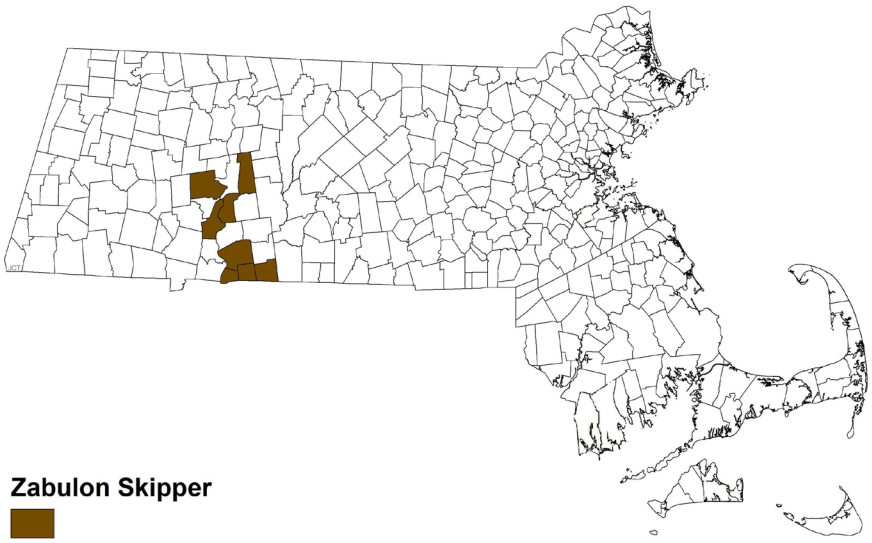
Poanes zabulon, at the Burma Road, Milton, MA site, August 14, 2010 (Photo by Mark Rainey)

Our current records of Zabulon Skipper date from 1988, when Roger Pease discovered a small colony at Fannie Stebbins Refuge in Longmeadow, just north of the Connecticut border in the Connecticut River valley. Reports from this area appeared in the 1986-90 Massachusetts Audubon Society Butterfly Atlas. Since that time, Zabulon Skipper has dramatically expanded its range eastward and northward in Massachusetts.

The maps below are based on Massachusetts Butterfly Club (MBC) "citizen science" sight and photographic reports, and Lepidopterists' Society Season Summary (LSSS) records. Massachusetts is divided into 351 towns, and the maps highlight any town from which a report of Zabulon Skipper was received.

Data such as this are obviously affected by the amount of effort put in to find a species, but in this case the broad range expansion shown is unlikely to be due simply to increased search effort over the years. The number of people in the field, their skill level, and the areas searched for butterflies did not change enormously over this period. The bulk of the data are from the Massachusetts Butterfly Club (MBC), which was formed in 1992 by a group of dedicated naturalists who had worked on the state butterfly atlas. The group subsequently affiliated with the North American Butterfly Association. It has kept up a yearly program of field trips and counts covering nearly all regions of the state, held teaching seminars, and through its listserve 'masslep' has compiled a database of over 100,000 butterfly sightings, most reviewed by a club record-keeper or other knowledgeable individuals and trip leaders. The resulting MBC database has been used in several scientific studies (Breed *et al*. 2012; Polgar *et al*. forthcoming).

MAP 1: From 1988 until 2008 *P. zabulon* was known only from the lower Connecticut River valley, primarily from Fannie Stebbins Wildlife Sanctuary, a mosaic of wet meadows along the river floodplain (Longmeadow, Hampden Co.). The skipper was also occasionally reported in small numbers from nearby towns. Club trips took place to the Fannie Stebbins site almost every year, to monitor the colony. May sightings, and consistent reports from year to year, indicated that thespecies was over-wintering and resident here, rather than a seasonal migrant.



Map 1. Massachusetts records for *Poanes zabulon* through 2007.

MAP 2: In 2008 Zabulons were first reported in eastern Massachusetts. One male was found and photographed at Allens Pond sanctuary in south Dartmouth (Bristol Co.; E. Nielsen, 9/13/2008). At the time, this was the easternmost sighting along the south coast; there had also been two 2008 photo-reports from the nearby Rhode Island coast. By 2009 there were additional sightings of individuals in September from south Dartmouth, and by 2010 sightings in May and June showed that the species was probably over-wintering in this area as well as further west.

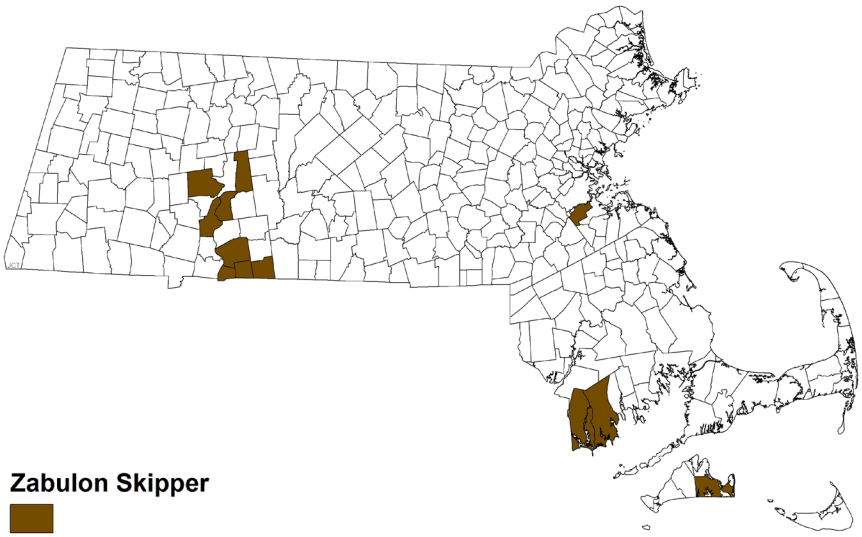
The 100-mile gap between the original *P. zabulon* population in the west and the new one in the east suggested that the eastern Massachusetts individuals had arrived along the coast from Connecticut and Rhode Island, rather than migrating from the original western Massachusetts location.

Movement further north in eastern Massachusetts was demonstrated when M. Arey found two males on August 23, 2009, at Fowl Meadows, Milton, just south of Boston (LSSS 2009; Norfolk Co.). Existence of an over-wintering colony at this site was confirmed the next year by naturalist S. Jaffe, whose photographs included two males on June 16, 2010; more sightings and photographs from August 2010 showed that there were two broods. In June 2011 fresh males were again found at this Milton colony. Finally, in 2010, *P. zabulon* also somehow found its way to the island of Martha's Vineyard, where a fresh male was found July 23, 2010, in Edgartown, in Manuel Correllus state forest (M. Arey, LSSS 2010). This was the first time this skipper had ever been reported from Martha's Vineyard (Dukes Co.).

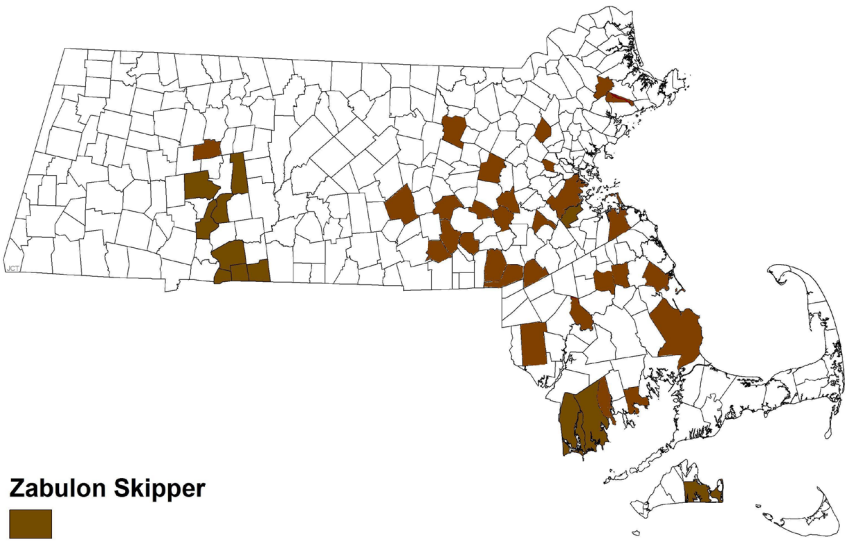
MAP 3: Between 2010 and 2012, zabulon skipper radiated throughout eastern Massachusetts, with most of the expansion apparently taking place in 2011 and 2012. Sightings in 29 new towns were reported in 2011 and 2012 alone. The skipper was found as far north as Topsfield and Wenham in Essex County (8/27/2011 and 8/12/2012, M. Arey, LSSS), and photographed as far west as Worcester in Worcester County (8/11/2012, H. Hoople). In the west of the state, Zabulon Skipper also moved a bit further north up the Connecticut River Valley, being reported from Whately in Franklin County (8/2/2012, B. Benner). Overall, the rapidity of this range expansion in the state has been truly dramatic.

Acknowledgments

I thank the Massachusetts Butterfly Club for the use of their dataset.



Map 2. Massachusetts records for *Poanes zabulon* through 2010.



Map 3. Massachusetts records for *Poanes zabulon* through 2012.

Literature Cited

Breed, Greg A., Stichter, S., and Crone, E. 2012. Climate-driven changes in northeastern US butterfly communities. *Nature Climate Change*. 2, 1 (August 19).

Caldas, A. Lepidoptera conservation under a changing climate. *News of the Lepidopterists' Society*. 53:3 Fall 2011.

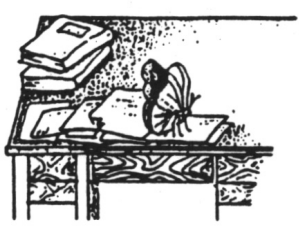
Klots, A. B. 1951. *A Field Guide to the Butterflies of North Amerca, East of the Great Plains*. Petersen Field Guide Series. Boston: Houghton Mifflin.

Opler, Paul A. and George O. Krizek. 1984. *Butterflies East of the Great Plains: An Illustrated Natural History*. Baltimore: John Hopkins University Press.

Parmesan, C., N. Ryrholm, C. Stefanescu, J.K. Hill, C.D. Thomas, H. Descimon, B. Huntley, L. Kaila, J. Kullberg, T. Tammaru, J. Tennant, J.A. Thomas, and M. Warren. 1999. "Poleward shifts in geographical ranges of butterfly species associated with regional warming." *Nature* 399: 579-583.

Polgar, C.A., R.B. Primack, S. Stichter, C. Hitchcock, and E. Williams. (2013). The effect of environmental factors on the timing of adult flight of Lycaenid butterflies in Massachusetts. *Biological Conservation*. In press.

Season Summary 2009, 2010, 2011. *News of the Lepidopterists' Society*. Vols. 52, 53, 54, Supplement S1.



From the Editor's Desk

James K. Adams

Just a short note about some FAQ's.

1. The DEADLINES for submission of articles for upcoming issues of the Newsletter are on the third to last page of this, and each, Newsletter.

2. You should NOT consider the deadlines to be soft, although I reserve the right to accept an imminently promised article or two after the deadline.

3. Please try to get articles to me well ahead of the deadline. Understand that if you send something at the deadline, there is NO GUARANTEE that your article will make it into that issue, as the issue may already be FULL.

4. I apologize to those who have had e-mails blocked because of too many attached images. If you want to include many pictures, you can send them: 1.) a few at a time in several e-mails, 2.) through the mail on a disc or flash drive, or 3.) use file transfer programs like Drop Box or Filezilla.

Results of the 2013 Election

The Lepidopterists' Society

President-elect	Todd Gilligan*	250
	Harry Zirlin	148
Vice-Presidents		
	Astrid Caldas*	358
	Jeff Marcus*	351
	Andrew Neild*	357
(write-in)	Susan Borkin	1
	Kilian Roever	1
	Philip DeVries	1
Executive Council At Large		
	Michael M. Collins*	338
	Kenelm W. Philip*	313
	Mark Salvato	200
	Jennifer Zaspel*	268
(write-in)	Bob Borth	1
	Keith Summerville	1
	Stan Gorodenski	1

There were a total of 402 ballots included in these results.
* - denotes winner.

New U.S. records, state records, and other interesting moths from Texas

Ed Knudson & Charles Bordelon

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Introduction

The purpose of this article is to document and illustrate new USA or Texas state records of moths, many of which have not previously appeared in the popular literature, apart from the Lepidopterist's Society Season Summary and certain private publications of the authors. Some of these records were included in publications by Lafontaine & Schmidt 2010, 2011; mostly based on the information given below. New records in the erebid genus *Eulepidotis* are treated in a separate article in this issue of the News. Certain other new Texas records have already been described and illustrated by other authors and will not be repeated here. Photos of many of these and many of the species listed below also appear in the websites of Moth Photographers Group and Bug Guide.

We have also tried to include species which were not treated in our previous article (2000, Bordelon & Knudson). Several other uncommon species and aberrations are also illustrated.

Corrections to the 2000 article are as follows:

Eudocima materna (L.) should be *Eudocima apta* (Walker)*; Luperina passer* (Gn.) should be *Resapamea passer* (Gn.); *Condica pyromphalis* Dyar should be *Condica parista* (Schaus).

Methods

The authors employed 3 main methods to attract and collect moths. 15 and 30 watt black lights, sometimes augmented with a 175 watt mercury vapor light were usually used on sheets. Bait attractants were usually used in a bait trap; sometimes placed near a collecting light. The bait consisted of mashed bananas, papaya, and mangos; cooked with brown sugar and stale beer, with yeast added to the cooled mixture. Pheromone traps were used to attract Sesiidae. The junior author spent 3 months in an apartment in Alamo, TX, around where most of the more interesting records were found.

Other associates (Berry Nall, Falcon Heights, TX, Mike Rickard, Mission, TX, and Leroy Koehn, Georgetown, KY) utilized similar collecting methods.

The Species List:
Sphingidae

Enyo ocypete (L.) (fig.1) A female specimen collected while nectaring on *Lantana* sp. at dusk by the junior author at Alamo, Hidalgo Co., TX on 30 Oct. 2012, represents the first record of this species from Texas. It is otherwise known from the US from south Florida, including a series collected in 1981 by Leroy Koehn.

The male *E. ocypete* is well known and unmistakable with its overall dark brown color and whitish patch on the anal margin of the hindwing. Females are similar to *E. lugubris* (L.) (fig. 2) but have never been described in detail by recent authors (Hodges, 1971; Tuttle, 2007; D'Abrera, 1986). Comments were made regarding the brown color of the labial palpi and the violet sheen on the posterior half of the forewing, as a point of distinction from *E. lugubris*. Those differences are present but can be subtle.

More obvious differences include the forewing shape, which is relatively shorter, broader and less falcate in *ocypete,* and usually with a straight, not wavy, antemedian line; antennae 25% longer in *ocypete*, and eye diameter, which is 15% greater in *ocypete*, compared to *lugubris* (2 *ocypete* females and 6 *lugubris* females measured). When the females of each species are compared side by side, the differences are obvious. However, without the benefit of direct comparison, it may be easy to overlook females of *E. ocypete*, and other specimens may be in collections, as yet unidentified.

Aellopos fadus (Cramer) (fig 3)

The illustrated female specimen was collected while nectaring on Lantana sp at dusk on 17 Oct., 2012 at Alamo, Hidalgo Co., TX by the senior author. While not new for Texas or for Hidalgo Co., it is the first modern voucher. There is an old record from Galveston, TX, but the specifics and location of the specimen is unknown to us.

Live examples of this species were photographed twice in 2011, once in Hidalgo Co., TX, Mission, by Martin Reid, and also in McLennan Co., TX, Waco, by Ann Gordon. We are unaware of other Texas records.

Aellopos fadus is readily distinguished from similar *A. titan* by the lack of a well-defined dark discal spot, and the double row of white macules on the postmedian area of the forewing.

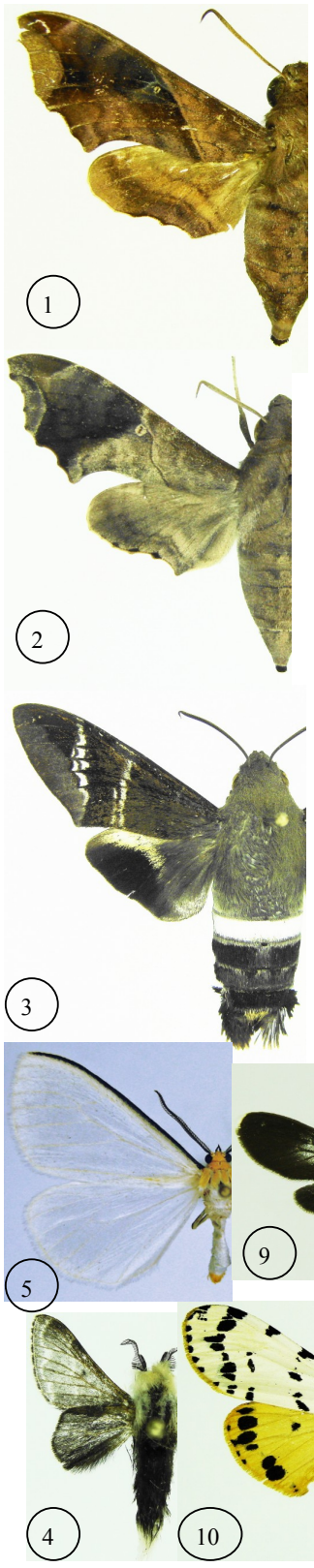

Fig 1. *Enyo ocypete*, female Alamo, TX. 30 Oct. 2012. Fig.2. *Enyo lugubris*, female Alamo, TX. 18 Nov. 2012. Fig.3. *Aellopos fadus*, female, Alamo, TX. 17 Oct. 2012. Fig.4. *Tolype mayelisae*, male, Rio Grande City, TX. 15 Nov. 2007. Fig.5. *Xenosoma flaviceps*, male, Alamo, TX. 3 Dec. 2012. Fig.6. *Aclytia heber*, male, Alamo, TX, 1 Nov. 2012. Fig 7. same specimen, underside. Fig 8. *Napata leucotelus*, female, Mission, TX. 6 Jan 2013. Fig 9. Same species, male, Mazatlan, Mexico, 27 Dec. 1973. Fig.10, *Estigmene acrea*, male, Falcon Heights, TX. 4 Sept. 2012. Fig.11. *Lophocampa bicolor*, male , Big Bend NP, TX. 28 May, 1981. Fig.12. same sp., female, same loc., 12 Aug. 1999. Fig.13. *Anomis gentilis*, female, Weslaco, TX. 31 Aug. 2012. Fig.14. *Cecharismena jalapena*, male, Bentsen State Park, Mission, TX. 17 Oct. 1998. Fig.15 *Deinopa angitia*, female, Santa Ana NWR, Alamo,TX. 18 Nov. 1984. Fig.16. *Massala obvertens*, male, Alamo,TX. 26 Oct. 2012. Fig.17. *Epidromia rotundata*, male, Spring Valley, TX, 16 Dec. 2012.

Fig.18. *Hemeroblemma mexicana*, female, Falcon Heights, TX. 6 June, 2012. Fig.19. same sp., male, Mexico, San Luis Potosi, Cd. Valles, 18 Oct. 1976. Fig.20. *Mocis cubana*, female, Alamo, TX, 2 Nov. 2012. Fig.21. *Ptichodes immunis*, female, Mission, TX. 4 Nov. 2012. Fig.22. *Cobubatha hippotes*, female, Alamo,TX. 26 Oct. 2012. Fig.23. *Cobubatha ipilla*, female, Big Bend NP, TX. 20 Aug. 1995. Fig.24. *Cobubatha megaplaga*, male, Concan, TX. 7 Sept. 2002.

Lasiocampidae

Tolype mayelisae Franclemont (Fig. 4)

The illustrated male of *Tolype mayelisae* was collected in Starr Co., TX, nr. Rio Grande City on 15 Nov 2007, in a light trap. In the type series, there were 4 female specimens, all from Brewster Co., TX. The authors subsequently collected 6 more females from Brewster, Val Verde, Presidio, and western Hidalgo Co's., TX. The male is smaller and darker than the females, as would be anticipated, but shares the unique chararcters described by Franclemont, 1973 in the female, in also having black antennae and a black discal spot on the forewing. The apparent rarity of the males might suggest predominantly diurnal flight, and the specimen figured is likely the first male ever found. Life history is unknown.

Erebidae

Xenosoma flaviceps (Wlk.) (Fig. 5)

The illustrated male specimen was collected in Alamo, Hidalgo Co., TX on 3 Dec. 2012 at light by the junior author. This is in the tribe Pericopini of the subfamily Arctiinae. We do not know if it is a primarily diurnal moth, as are many of the others in this tribe. It is interesting to speculate that it may be involved in a mimicry complex that includes *Palpita flegia* (Cramer), Crambidae, which happened to be quite common in Alamo at the time.

This moth is new for the USA. It was identified from a photo by Chris Schmidt and is also illustrated by Watson & Goodger, 1986. It is otherwise known from Mexico and Guatemala. This species was reared in Mexico by Roy Kendall. The label data from a pair of imagines in the Smithsonian (NMNH) is as follows: Mexico, Tamaulipas, Gonzales Ranch nr. Los Kikos, ex larva on *Senecio confusus* (Compositae). Male, 24 Dec 1974, and female, ex ova, from the same plant obtained on 29 Dec. 1974 (Don Harvey, pers. comm.).

Aclytia heber (Cramer) (Figs. 6 & 7)

Thie illustrated specimen was collected on 1 Nov., 2012 at Alamo, Hidalgo Co., TX at light by the junior author. Because of the striking coloration, especially on the venter, and the date on which it was found, we suggest the common name "Halloween Wasp Moth".

This new USA record is also known from Mexico to northern South America. The determination was confirmed by Julian Donahue. Many specimens have a larger orange spot or a band on the *outer* third of the forewing.

Napata leucotelus Butler

A live photo of this species was submitted to Bug Guide by Rick Nirschl, who photographed it in Mission, Hidalgo Co., TX on 6 Jan. 2013. He kindly permitted us to reproduce it here. This species is new for the USA and Texas. Also illustrated is a spread specimen from Mazatlan, Mexico collected by Jim Brock. *N. leucotelus* ranges from southern Texas to northern South America. This moth is distinguished by the narrow white tip and transparent patch on the forewing and the whitish dorsal longitudinal stripe on the abdomen. The underside is black. The genus *Napata* Walker 1854, includes other species, some of which are quite different in wing coloration and pattern.

Estigmene acrea (Drury) (Fig. 10)

An interesting aberrant form of this common species is illustrated. It was reared from ova obtained from a confined female collected on 4 Sept. 12 in Starr Co., TX, Falcon Heights, by Berry Nall. The unusual pattern may be an artifact of rearing.

Lophocampa bicolor (Walker) (Figs. 11 & 12)

This species, which is a new USA record was found and identified by Chris Schmidt in the Canadian National Collection. Label data is: Big Bend National Park (Brewster Co., TX), The Basin, 11 May, 1959, collected by M.R. MacKay. A photo sent to the authors enabled us to associate this with a small series of *Lophocampa* from the same locality. The illustrated specimens are from Brewster Co., TX. Big Bend National Park, Green Gulch, 28-V-1981 (male), and Chisos Basin, 12 Aug. 1999 (female).

This species resembles pale examples of *Lophocampa caryae* Harris which also occur in the same locality. It differs mainly by lacking any trace of dark linear maculation on the forewing. It is otherwise known from Mexico.

Anomis gentilis Schaus (Fig. 13)

The illustrated specimen is from Weslaco, Hidalgo Co., TX, 31 Aug. 2012, collected by Mike Rickard. It has been misidentified in many collections as *A. exacta* Hubner, which apparently does not occur in the USA. Rickard noted the discrepancy after comparing this specimen to images on the website of Janzen & Hallwachs on Guanacaste (Costa Rica) Lepidoptera and this was later confirmed by Lafontaine after comparing this to type photos. This small *Anomis* species is sometimes common in Cameron and eastern Hidalgo Co's in south Texas.

Cecharismena jalapena Schaus (Fig. 14)

This specimen is from Hidalgo Co., TX., Bentsen State Park, 17 Oct. 1998, collected by both authors at light. This small moth is not uncommon in Cameron, Hidalgo, and Starr Co's., of south Texas and has also been found in Uvalde, Medina, McLennan, Travis, Kleberg, and Brooks Co's. It was previously misidentified in collections as *C. abarusalis;* this was corrected by Lafontaine & Schmidt, 2010. The female has a more mottled pattern on the forewing.

Deinopa angitia (Druce) (Fig. 15)

This species is known in the USA from 3 specimens from Hidalgo Co., TX. The illustrated female specimen is from Santa Ana NWR collected at light by the sr. author on 18 Nov., 1984. The sexes are dimorphic; the males have a tan ground color with darker vertical antemedial and postmedial bands on the forewing. This species, which is new for the USA, was identified by Lafontaine from specimens.

Massala obvertens (Walker) (Fig. 16)

This colorful species is rare in Texas and also occurs in southern Florida. The illustrated specimen is from Alamo, Hidalgo Co., TX, and was collected by the junior author at light on 26 Oct. 2012. The authors have previously collected this species in Cameron, Hidalgo, and Jim Hogg counties of TX.

Epidromia rotundata Herrich-Schaffer (Fig. 17)

The illustrated specimen was collected in Spring Valley, Harris Co., TX, on 16 Dec. 2012, in a bait trap by the junior author. It was also found and photographed recently in McLennan Co., TX, Waco, by Ann Gordon. These apparently are the first Texas records for this species, which is recorded from Florida, south Georgia and Louisiana, and likely occurs along the entire Gulf Coast.

Until recently, this moth went under the name of *Epidromia fergusoni* Solis, but recently this name was found to be a synonym (Lafontaine & Schmidt, 2010). A similar species, *E. pannosa* Guenee. has been found in Hidalgo Co., TX by the authors.

Hemeroblemma mexicana (Guenee) (Figs. 18 & 19)

The illustrated female specimen is new for the USA. It was collected in Starr Co.,TX, Falcon Heights, on 6 June, 2012, in a bait trap, by Berry Nall. A male specimen from Mexico is also illustrated. The known range is from southern Texas to Costa Rica. There are about 25 additional species in the neotropics, including one (*H. opigena* Drury), which occurs in southern Florida.

Mocis cubana Hampson (Fig. 20)

This species, which is a new Texas record, was found in moderate numbers at Alamo, Hidalgo Co., TX, in Oct-Nov. 2012. The illustrated specimen was collected at light on 2 Nov. 2012, by the junior author. It differs from the very similar *M. disseverans* by having a violet-blue sheen and a small white antemedian dot on the forewings. Recently, other specimens from Texas were found from Cameron and Harris Cos.

This species occurs in Florida and has strayed northward to Iowa.

Ptichodes immunis (Guenee) (Fig. 21)

The illustrated specimen is from Mission, Hidalgo Co., TX. where it was collected by Mike Rickard on 4 Nov. 2012 at light. Another specimen was collected by Maury Heiman in Medina Co., TX., Devine, on 8 Nov. 2012. It differs from the similar *P. vinculum* (Gn.) by the lighter tan color, more prominent reniform, and lack of a black apical spot on the forewing. This species is also known from Florida. It is a new state record for TX.

Noctuidae

Cobubatha hippotes (Druce) (Fig. 22)

This small moth was collected in Alamo, Hidalgo Co.,TX on 26 Oct. 2012 by the junior author. It is known previously from an old record from Mercedes, Hidalgo Co., TX. The date and whereabouts of that specimen are unknown to us. It is also recorded from southeastern Arizona.

Cobubatha ipilla Dyar (Fig. 23)

This new USA record was first collected in Brewster Co., TX, Big Bend National Park, Nugent Mt. on 20 Aug. 1995, by the senior author in a light trap. The illustrated specimen is also from Big Bend NP, Green Gulch, from 9 Sept. 2008 by both authors. This moth is quite similar to *C. hippotes* differing in the shape of the median dark patch and lacking a prominent reniform spot. Both of these species were identified by Lafontaine.

Cobubatha megaplaga (Dyar) (Fig. 24)

The illustrated specimen was collected in Concan, Uvalde Co.,TX on 7 Sept. 2002 by both authors. A series of about 35 specimens were collected at this locality and date. The first record from the USA was from the same locality on 18 Apr. 1990, collected by Noel MacFarland. It also known from 2 specimens from Val Verde Co., TX., Dolan Falls, 17-Aug. 1993, collected by James Gillaspy. Dr. Lafontaine also identified this species.

Acknowledgments

The authors are most grateful to J.D. Lafontaine, B. Christian Schmidt, Julian P. Donahue, M. Alma Solis, Don Harvey, and Jean Haxaire who provided or confirmed identifications and gave additional information that appears herein. Our contributors Berry Nall, Mike Rickard, Leroy Koehn, Maury Heiman, Rick Nirschl, Ann Gordon, and Martin Reid provided specimens or photos, which are illustrated or mentioned in this publication. We especially thank Keith Hackland, our host at the Alamo Inn, Alamo, TX, and his staff for their gracious hospitality. We acknowledge Santa Ana National Wildlife Refuge, Texas Parks and Wildlife Dept, and The National Park Service, Big Bend National Park for providing permits and access. Lastly we thank our photo editor, Susan Lee-Bordelon, for making the images presentable.

Continued on p. 17

A selection of Neotropical skippers and butterflies

George O. Krizek

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Presented here are 38 living photographs of 36 species (two on back of Newsletter) of Neotropical butterflies and skippers from various South and Central American areas. With a few exceptions, I was unable to locate these species in the excellent series of books by Garwood-Lehmann from 2009-, a heroic work enriching our knowledge regarding Neotropical Lepidoptera. To determine the specimens pictured here, I used Bernard D'Abrera's publications, though my picture of *Pierella helvetia/helvina* does not nicely fit either of those two species. I always take pictures of living specimens in their "natural" habitats, using Nikon cameras and Ectachrome and/or Fuji color diafilm. Enjoy!!

Hesperiidae: *Thracides thracea*
April 19, 1992, Rondonia, Brazil

Hesperiidae: *Lento lento*
March 15, 1991, Rondonia, Brazil

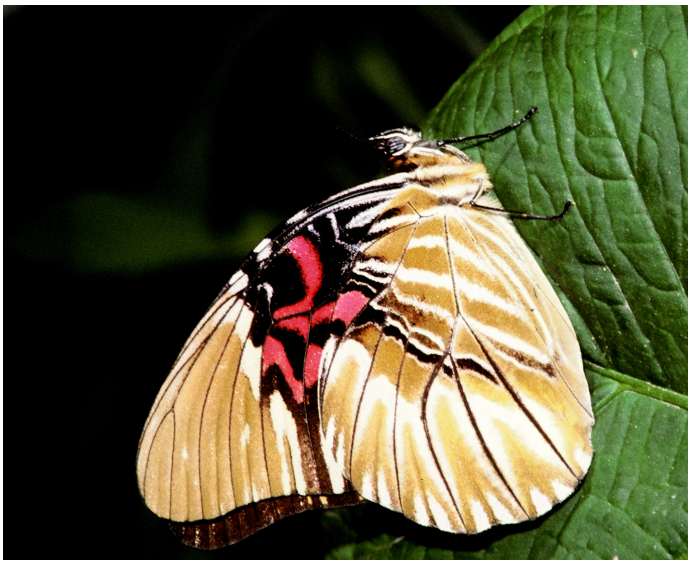
Hesperiidae: *Xeniades chelestra*
April 14, 1992, Rondonia, Brazil

Hesperiidae: *Haemactis albamarita* Austin
April 13, 1992, Rondonia, Brazil

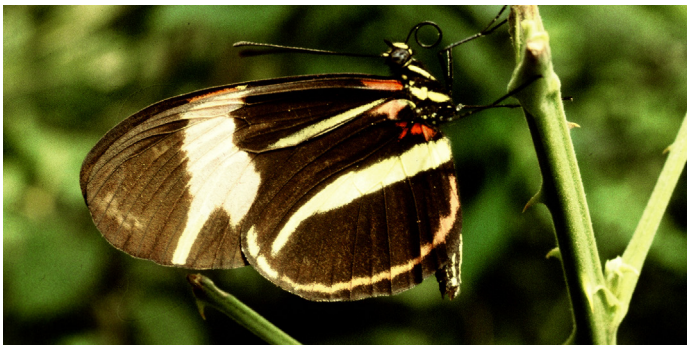
Hesperiidae: *Cabirus procas*
November 10, 1989, Rondonia, Brazil

Pieridae: *Leptophobia caesia*
May 12, 1985, Poas, Costa Rica

Pieridae: *Dismorphia cinerascens*
May 19, 1985, Monte Verde, Costa Rica



Nymphalidae (Danainae): *Anetia thirza*
May 19, 1985, Monte Verde, Costa Rica



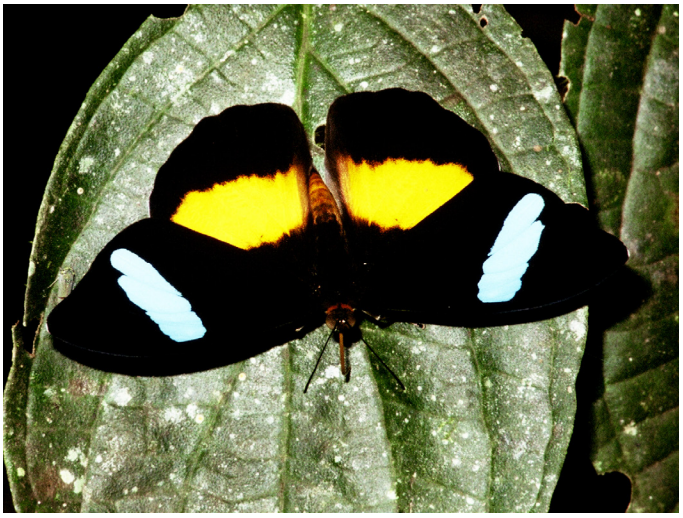
Nymphalidae: *Heliconius besckei*
March 13, 1984, Curitiba, Brazil

Nymphalidae: *Heliconius athis*
May 9, 1990, Tinalandia, Ecuador

Nymphalidae: *Heliconius erato cyrbia*
May 8, 1990, Tinalandia, Ecuador

Nymphalidae (Ithomiinae): *Mechanitis menapis mantineus*
May 9, 1990, Tinalandia, Ecuador

Nymphalidae: *Adelpha plesaure*
November 5, 1989, Rondonia, Brazil



Nymphalidae: *Nessaea obrinus*
March 22, 1991, Rondonia, Brazil

Nymphalidae: *Catonephele sabrina*
March 16, 1984, Curitiba, Brazil

Nymphalidae: *Catonephele salacia*
March 21, 1991, Rondonia, Brazil

Nymphalidae: *Marpesia iole*
May 9, 1990, Tinalandia, Ecuador

Nymphalidae: *Panacea divalis*
November 8, 1989, Rondonia, Brazil

Nymphalidae: *Perisama bonplandii,* upperside, underside; May 10, 1990, Tinalandia, Ecuador

Nymphalidae: *Catagramma eunomia*
July 29, 1989, Loreto, Peru

Nymphalidae: *Eresia lansdorfi*
March 12, 1984, Sao Bento Do Sul, Brazil

Nymphalidae: *Chlosyne gaudealis,* upperside, underside; May 16, 1985, Turrialba, Costa Rica

Nymphalidae: *Agrias amydon bellatrix*
April 23, 1992, Rondonia, Brazil

Nymphalidae: *Memphis polyxo*
April 24, 1992, Rondonia, Brazil

Nymphalidae (Brassolinae): *Caligo uranus*
May 14, 1985, Turrialba, Costa Rica

Nymphalidae: *Memphis vicinia*
March 22, 1991, Rondonia, Brazil

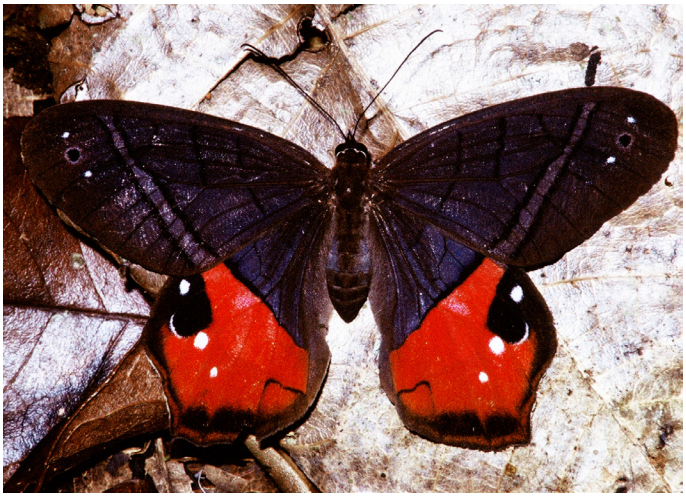
Nymphalidae (Brassolinae): *Catoblepia orgetorix*
May 15, 1985, Turrialba, Costa Rica

Nymphalidae (Morphinae): *Antirrhea murena*
November 8, 1989, Rondonia, Brazil

Nymphalidae (Satyrinae): *Taygetis echo*
April 18, 1992, Rondonia, Brazil

Nymphalidae (Satyrinae): *Penrosada lena*
May 10, 1990, Tinalandia, Ecuador

Nymphalidae (Satyrinae): *Pierella astyoche*
July 21, 1989, Loreto, Peru



Nymphalidae (Satyrinae): *Pierella helvetia/helvina*
May 15, 1985, Turrialba, Costa Rica

Riodinidae: *Euselasia* sp., nr. *anica*
July 20, 1989, Loreto, Peru

Lycaenidae: *"Thecla" oceia*
May 19, 1985, Monte Verde, Costa Rica

Eulepidotis persimilis (Guenee), (Erebidae: Eulepidoptinae): a new USA record, and *Eulepidotis dominicata* (Guenee): a confirmation of occurrence in the USA

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Eulepidotis Hubner, 1823 is a large neotropical genus, with over 100 species, of small to medium-sized, colorful moths, of which 7 species have been recorded from the United States. The adults have strongly patterned forewings often, with dark subterminal and median bands, which are either parallel, or meet at the tornus. Ground color may be glossy white, yellow, brown or green. The hindwings may be patterned like the forewings, or plain yellowish or white and usually have a short tail at the tornus, often with an ocelloid patch with blue scales.

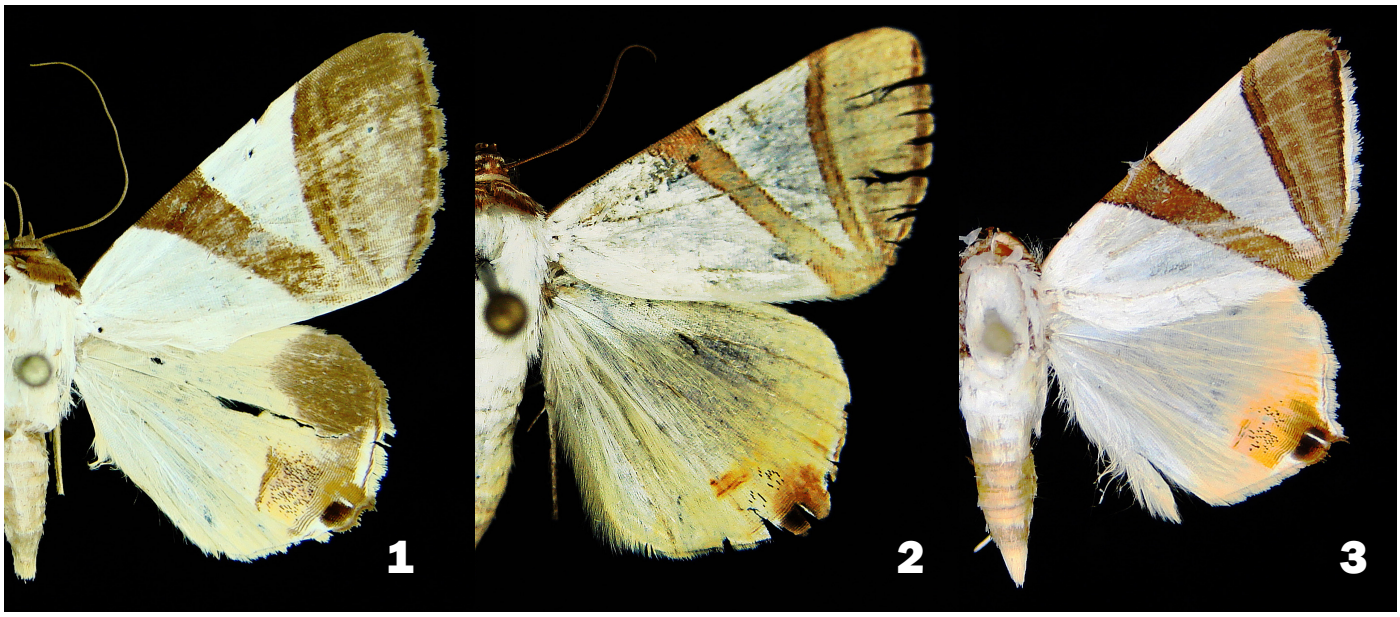
Larval hosts are unknown for the USA. In Costa Rica, various species are reported on the following plant families: *Chrysobalanaceae, Fabaceae, Bombacaceae, Sterculaceae, Sapindaceae,* and *Tiliaceae* (Janzen & Hallwachs, website).

There are 5 species known from Texas including *E. micca* (Druce) 1889, *E. addens* (Walker) 1858, *E. rectimargo* (Guenee) 1852, *E. dominicata* (Gn.) 1852, and *E. persimilis* (Guenee), 1852.

The genus was revised by Harrison Dyar, 1914. In this work, Dyar attributes *E. dominicata* to the United States, but did not have any specimens for confirmation. This may have been based upon the earlier mention of this species by W. J. Holland, 1903. Holland correctly illustrated a specimen in his book and in the text attributed the species to Texas.

According to J.D. Lafontaine (pers. comm.), there was no known specimen or other documentation for *E. dominicata* from the United States. The illustrated specimen, which is now in the Texas Lepidoptera Survey Research Collection, Houston, TX, was collected by Leroy Koehn in Mission, TX, in a bait trap on 11 Nov. 2002. Determination by Knudson & C. Bordelon was confirmed by J.D. Lafontaine from a photo.

A somewhat worn, but recognizable, male specimen of *E. persimilis* was collected by Mike Rickard at his home in Mission, TX, at black light, on 5 Oct. 2011. The determination was confirmed by Lafontaine from a photo of the mounted specimen. This, and the preceding records appear in Lafontaine & Schmidt, 2011.



Eulepidotis species: 1) *dominicata*, 2) *persimilis*, and 3) *erectimargo*. See text for locality information. (photos by Ed Knudson)

There are 2 other similar species that have been recorded from the USA and others that are similar from the neotropics. *E. rectimargo*, which is also known from Texas (illustrated example is from Terrell Co., TX, Sanderson Canyon, 20 July, 2001, Leroy Koehn), and *E. metamorpha* Dyar 1914, known from Florida, both lack the dark brown patch on the upper outer margin on the hindwing and have a white forewing fringe. *E. electa* Dyar 1914, was recorded from Arizona, but the specimen, upon re-examination, has proven to be *E. rectimargo*. *E. persimilis* is most similar to these, but lacks the white forewing fringe. *E. dominicata* also lacks the white fringe and like *E. electa*, has a dark brown patch on the cubital margin of the hindwing. The 7th species documented from the USA (Florida) is *E. striaepuncta* (Herrich-Schaffer),1868 , which closely resembles *E. addens*.

Very few *Eulepidotis* records are known from Texas, with *E. dominicata* and *E. persimilis* known from a single record each and the remaining species known from 2 or 3 records each. Although appropriate host plants exist in Texas, there are no rearing records for the genus. Most of them are probably non-breeding strays from Mexico.

Acknowledgements

The authors thank Dr. J.D. Lafontaine who confirmed our determinations, which was not an easy task, and encouraged us to publish this information.

Literature cited

Dyar, H. 1914. Revision of Eulepidotis. Proceedings of the U.S. National Museum 47 (2046).

Holland, W.J. 1903, The Moth Book, Dover edition (1968)

Janzen & Hallwachs, on line, Lepidoptera of the Guanacauste NP, Costa Rica. (Janzen.sas.upenn.edu)

Lafontaine J.D. & B.C. Schmidt, 2011. Additions and Corrections to the Checklist of the Noctuoidea of North America, North of Mexico. ZooKeys 149: 145-161.

New records and interesting moths from Texas

Continued from p. 9

Literature cited

Bordelon C.W. & E.C. Knudson, 2000. New Records of Lepidoptera from Texas and the USA, and Illustrations of Other Interesting Species. News of the Lepid. Soc. 42 (1) p. 3-7, 19

D'Abrera, B., 1986. Sphingidae Mundi. E.W. Classey, UK.

Franclemont, J.G.1973. Mimallonoidea & Bombycoidea, Moths of America North of Mexico, E.W. Classey Ltd. UK

Hodges, R.W.,1971. Sphingoidea, Moths of America North of Mexico, fasc. 21, E.W.Classey Lmt., UK

Lafontaine, J.D. & B.C. Schmidt, 2010. Annotated Checklist of the Noctuoidea of North America, North of Mexico. ZooKeys 40. 239p.

Lafontaine, J.D. & B.C. Schmidt, 2011. Additions and Corrections to the Checklist of the Noctuoidea of North America, North of Mexico. ZooKeys (149) p. 145-161.

Tuttle, J.P., 2007. The Hawk Moths of North America. Wedge Entomological Research Foundantion, Washington D.C.

Watson, A. & D.T. Goodger, 1986. Catalogue of Neotropical Tiger-Moths, Occasional Papers on Systemic Entomology No.1, British Museum (Natural History) London.

Websites

Bug Guide <bugguide.net>

Janzen & Hallwachs, Area de Conservacion Guanacaste, Northwestern Costa Rica <Janzen.sas.upenn.edu>

Moth Photographers Group <Mothphotographersgroup.msstate.edu>

The Mailbag . . .

Dear Editor,

It is my understanding that the possible listing of *Plebejus shasta* in the Spring Mountains has created some controversy within Lep. Society membership. Some comments or their aggregate submitted to USFWS by people unfamiliar with past research, mismanagement of critical habitat, and the current status of *shasta*, could indirectly or directly contribute to the eventual extinction of *shasta* and other rare taxa in the Spring Mountains.

USFWS doesn't want to list *shasta* because it only occurs on lands managed by USFS and a listing would be an embarrassment for USFS, an admission that the agency has failed to properly manage habitat.

If the bug doesn't receive protection USFS will view it as a green light to continue to do as they please.

Where were all of the now extremely concerned individuals during the last 7 years (*shasta* first petitioned in 2005)?

I invite everyone interested to the Spring Mountains -- to search for additional colonies of *shasta, acastus* and other rare and declining species -- I would appreciate your help.

Sincerely,
Bruce M. Boyd

476 McBride Way, Henderson, Nevada, 89105
bboyd20@cox.net

The first National Moth Week (2012): A review and highlights

David Moskowitz[1] and Liti Haramaty[2]

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[2]Institute of Marine and Coastal Sciences, Rutgers University, New Brunswick, New Jersey, USA **liti@nationalmothweek.org**

The first annual National Moth Week (NMW) was held 23-29, July, 2012. National Moth Week was envisioned as a way to spotlight moths and their ecological importance and to collect and report meaningful data on moths across a wide geographic area largely through Citizen Science. The first National Moth Week proved to be exceptionally successful at achieving these goals. Highlights of the first National Moth Week include:

- 07 registered locations in 29 countries including 49 US states. 59 of the registered locations reported multiple events during the week, with half of all registered events being Public. (Figure 1).
- Participation was extremely diverse ranging from individuals and families looking for moths in their own backyards or local parks to conservation organizations and state agencies holding well-advertised public events. National Moth Week locations were in inner cities such as downtown Manhattan, to remote places in Costa Rica, Kenya, Gambia and elsewhere. Events were also very varied ranging from typical nocturnal moth nights with lights and bait; PowerPoint presentations on moths and their ecology; daytime walks to search for caterpillars and moths; talks about the impact of artificial lights on moths and daytime walks to search these lights for moths; moth parties replete with moth-themed foods and special access to moth collections at Cornell University. (Event photos on the website at http://nationalmothweek.org/locations/your-nmw-event-photos/ and Flicker Group http://www.flickr.com/groups/2155416@N22/http://www.flickr.com/groups/2155416@N22/).
- In order to facilitate data collection of moths, National Moth Week partnered with Discover Life, Butterflies and Moths of North America (BAMONA), Project Noah, BugGuide, and Moth Photographers Group (MPG). These sites are all repositories for data and photographs about moths and other organisms. The effort was highly successful with more than 3,500 submissions to these natural history data sites. The partner organizations that collect data limited to North America received over 2,000 submissions. Close to a thousand (972) moth photos were uploaded into Discover Life's albums, BugGuide received 927 submissions and 421 photos were added to the BAMONA website. 'Spottings' from around the world were added to Project Noah through its global "Moths of the World" mission. Reports of 684 'spottings' came from 30 countries on all continents (except for Antarctica), (Table 1).

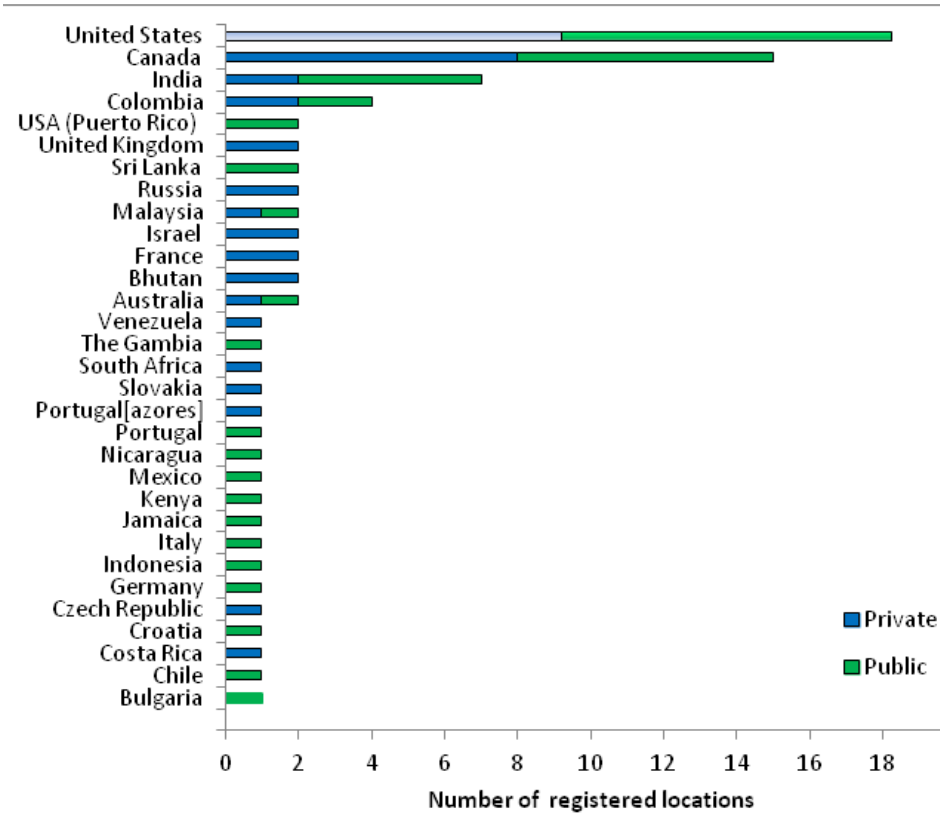

Figure 1. Number of registered National Moth Week event locations. United States bars are not to scale with 125 private events and 120 Public event in the USA

Continent	Country	# Of Spottings	Continent	Country	# Of Spottings
Africa		3		Germany	1
	Nigeria	1		Netherlands	6
	South Africa	2		Norway	5
Asia		120		Portugal	15
	Bhutan	42		Slovakia	2
	India	33		Spain	24
	Indonesia	1		Switzerland	2
	Japan	3		United Kingdom	4
	Malaysia	9		France	3
	Pakistan	1	North America		432
	Philippines	10		Canada	55
	Sri Lanka	21		Costa Rica	4
Australia		16		Mexico	37
	Australia	16		Panama	3
Europe		84		USA	333
	Austria	3	South America		29
	Belgium	1		Brazil	5
	Croatia	18		Colombia	24
Project Noah	Total	684			

Table1. Number of submissions to Project Noah by country.

- As an incentive to submit observations BAMONA introduced a NMW tag, Discover Life offered a $100 prize for one participant who submitted to an album and Project Noah created a special National Moth Week digital patch for anyone contributing a moth observation during the week only (Figure 2).

Figure 2. Project Noah National Moth Week Digital Patch.

- National Moth Week partnered with major nature authors and provided participants the opportunity to win a signed copy of their books. Other nature books that were out of print or difficult to obtain were also offered by National Moth Week. Books donated by authors included:

Jim Arnosky - Crinkleroot's Guide to Knowing Butterflies and Moths
John Himmelman - Discovering Moths: Nighttime Jewels in Your Own Backyard
Seabrooke Leckie - Peterson Field Guide to Moths of Eastern North America
Jim Sogaard - Moths & Caterpillars of the North Woods
David Wagner - Caterpillars of Eastern North America
David Wagner - Owlet Caterpillars of Eastern North America

Books donated by National Moth Week:

The Moth Book: A Popular Guide to a Knowledge of the Moths of North America
Rare, Declining, and Poorly Known Butterflies and Moths (Lepidoptera) of Forests and Woodlands in the Eastern United States
Butterflies and Moths of Pacific Northwest Forests and Woodlands: Rare, Endangered, and Management-Sensitive Species

- After National Moth Week all registered participants received a certificate for their participation (Figure 3).

Figure 3. Certificate of Participation.

- The first National Moth Week received vast media attention including coverage on both the National Geographic and Scientific American websites and in many other newspaper and

online outlets. Events in state and local parks were also widely publicized by municipal, state and even tourism-focused websites. National Moth Week also received a letter of support from United States Congressman Rush Holt.

- National Moth Week was also featured on the Encyclopedia of Life as a Podcast spotlighting three separate moth night events that week in New Jersey, Louisiana and Hawaii (http://education.eol.org/podcast/moths)
- In order to create a readily accessible portal for National Moth Week events, and to promote connectivity of people and groups, a website, Facebook page, Twitter account and Flicker group were created. The website (www.nationalmothweek.org) provided searchable maps and links to all registered events allowing anyone interested to find a nearby event (Figure 4). The website also contains information and resources for moth'ers. The website has currently received more than 50,000 visits and over 475,000 page visits from 89 different countries (Figure 5). The Facebook page has close to 1,500 'likes' from 46 countries and during National Moth Week had a "Reach" of more than one million. A second Facebook page focused on caterpillars was created after NMW and currently has over 160 'likes'. The NMW Twitter feed has over 200 followers from all over the world, including nature reporters, scientists and educators. NMW twits are regularly re-twitted by followers who themselves have thousands of followers. The NMW Flicker group serves as a platform for participants to share photos of setups, moths and moth'ers.

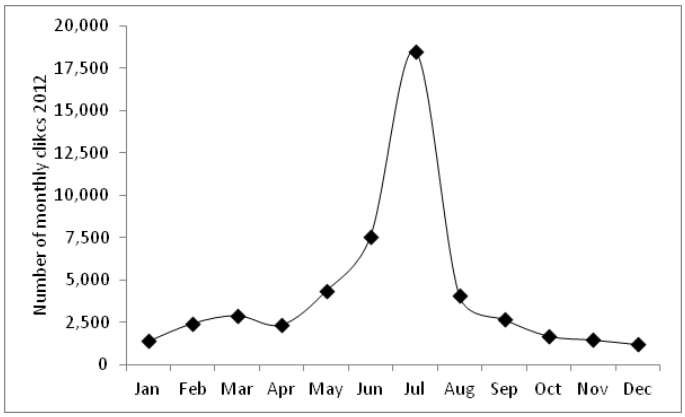

Figure 5. Number of visitors to www.nationalmothweek.org during 2012 showing the spike corresponding to the event.

- Partnerships are being developed with DiversityIndia, Biodiversity Bhutan, the Slovakian Entomological Society and with entomologists in Russia to develop nationwide involvement across those countries for the next National Moth Week.
- Partnerships with conservation organizations continue to expand. Our most recent include the Xerces Society. National Moth Week is also co-sponsoring Mothapalooza! in Ohio.
- National Moth Week is developing a Scientific Advisory Board to help guide the future of the project. Current board members are: Yasser Ansari (Project Noah), Kelly Lotts (BAMONA), Nancy Lowe (Discover Life), Dr. Merrill Peterson (Western Washington University), Dr. John Pickering (Discover Life and University of Georgia), Dr. Kenelm Philip (Institute of Arctic Biology), Michal Rindos (Comenius University, Slovakia), David Small (President, Athol Bird and Nature Center, Massachusetts) and Dr. David Wagner (University of Connecticut).

All subsequent National Moth Weeks will be held the last full week in July.

National Moth Week is a project of the Friends of the East Brunswick Environmental Commission, a 501C3 Not-For-Profit organization.

Continued on p. 28

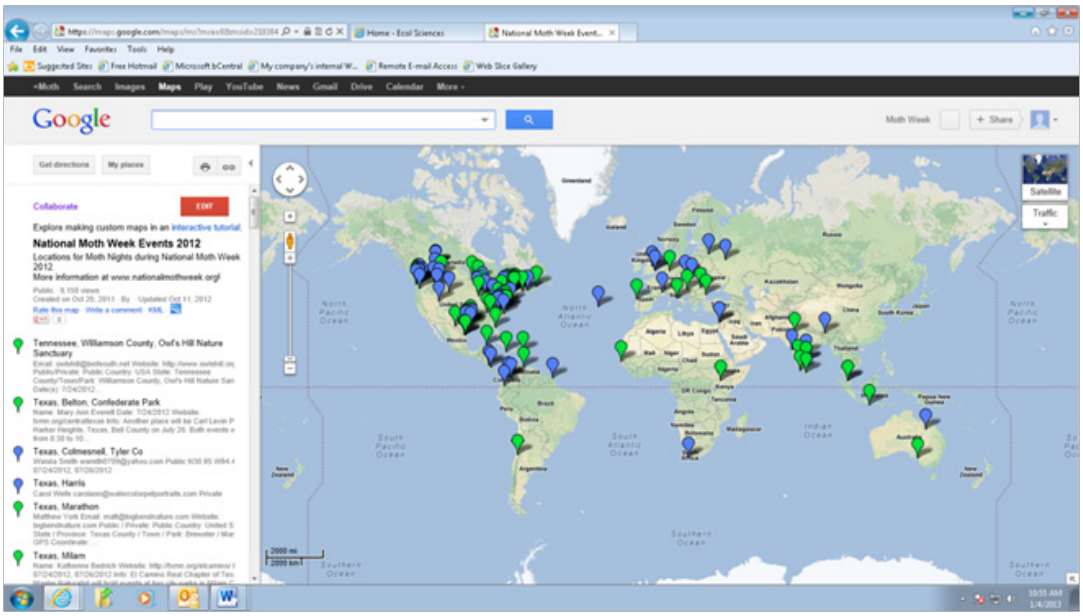

Figure 4. Interactive Google map showing NMW event locations. Green markers are public events; blue markers are private events. Information on each event is visible by clicking on a marker.

Membership Updates...

Julian Donahue

Includes ALL CHANGES received by 15 February 2013

"Lost" Members (publications returned: "temporarily away," "moved," "left no address," or "addressee unknown"):

Rojas, Julio Cesar (Everett, Washington)
Sisson, Melissa (Huntsville, Texas)
Vargo, James T. (Mishawaka, Indiana)
Wilson, Karen Kramer (Chicago, Illinois)

Additions/corrections to entries in 2012 Directory:

Altstadt, Daphne*:* surname misspelled "Alstadt" in Directory
Holmes, James P.*:* correct ZIP+4 is 03583-6214
Knight, Kenneth R.*:* new phone number is (616) 719-0201
Ortiz-Garcia, Manuel*:* correct e-mail address is boliche_y_chapinete@yahoo.es

New and Reinstated Members: members who have joined/renewed/been found/or rescinded their request to be omitted since publication of the 2012 Membership Directory (not included in the 2008 Membership Directory; all in U.S.A. unless noted otherwise)

Atkins, Stephen B.: 615 Maple Drive, Surfside Beach, SC 29575-3417.
Banker, Brian P.: [address omitted on request]
Bauman, Robert, Jr. (Ph.D.): 2610 South Harrison Street, Amarillo, TX 79109-2536.
Blaine, F. Matthew: 908 West Street, Laurel, DE 19956-1932.
Bonebrake, Timothy (Ph.D.): School of Biological Sciences, University of Hong Kong, Pokfulam Road, Hong Kong, Hong Kong.
Caldwell, Jeffrey: 2730 Oak Road, Apt. 8, Walnut Creek, CA 94597-2807.
Clark, Mark P. (M.D.): 1134 Orchard Road, Lafayette, CA 94549-3142.
de la Tour, Benjamin: Résidence les Ebénistes, 96 rue Eugène Marignan, Bâtiment C le Palissandre, Apt. 43, Lunel 34400, France.
Dolliver, Lisa (Mrs.): 1706 M Avenue, Plano, TX 75074-6106.
Gilligan, John M.: [address omitted on request]
Glaeske, Daniel M. (M.D.): Box 2106, Assiniboia, Saskatchewan S0H 0B0, Canada.
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Kohll, Steve: 30, rue de Dudelange, L-3630 Kayl, Luxembourg.
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Osborn, Zoe: 240 12th Street, Arcata, CA 95521-5912.
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Sayler, Maxwell: 101 East Conover Avenue, Eureka, IL 61530-1451.
Ware, Valerie Ann (Ms.): 124 West Virginia Avenue, Severn, MD 21144-3200.
Whiteside, Sam: 2000 Coffee Lane, Sebastopol, CA 95472-9651.
Willmott, Keith R. (Ph.D.): [address omitted on request]
Wolpert, Colleen (Mrs.): [address omitted on request]
Yamaguchi, Ryo (Mr.): [address omitted on request]

Address Changes (all U.S.A. unless noted otherwise)

Bromfield, Jed: 4854 Faircourt Drive, West Bloomfield, MI 48322-1519.
Dunford, James C. (Dr.): 1514 Sheridan Road NE, Apt. 4017, Atlanta, GA 30324-5473.
Faulkner, David K.: 623 Avenue C, Redondo Beach, CA 90277-4840.
González, Jorge M. (Ph.D.): Department of Plant Sciences, California State University, Fresno, 2425 East San Ramon Ave. M/S AS72, Fresno, CA 93740-8033.
Lee, John E.: 9300 Orchard Blvd., Apt. 1302, Midwest City, OK 73130-7175.
Leski, Michael (Ph.D.): 3216 Crestwood Lane, Glenview, IL 60025-2626.
McClair, Leslie M: 3169 Highway 14, RR#3, Windsor, Nova Scotia B0N 2T0, Canada.
Nylin, Soren (Ph.D.): Department of Zoology, Stockholm University, SE-10691 Stockholm, Stockholm, Sweden.
Szafraniec, Ashley M. (Ms.): 250 Laurie Lane, P.O. Box 955, Washington, PA 15301-8843.

Chasing butterflies in the land of Oz:
July 23-29, 2012

Mark Walker

5062 Nighthawk Way, Oceanside, CA 92056 **Mark.Walker@ga.com**

I am pleased to submit this second installment covering my butterflying adventures to and from the 2012 annual meeting of the Lepidopterist's Society held in Denver, Colorado last July. My passion for all things related to Lepidoptera began at the ripe age of 6, and over the nearly 50 years since I have developed a secondary passion for writing and sharing my field experiences with any and all who might be interested. This current installment covers my adventures during the week of the meeting, focusing on the multiple opportunities I enjoyed for sampling butterflies across varying habitats within driving distance of the meeting site. Several of these day trips were coordinated by the LepSoc, while others were organized on my own – during days when I was content to play hooky from attending the presentations due to irresistible weather.

Colorado has always been a favored destination, providing some of the richest faunal and floral diversity to be experienced anywhere within the U.S. As I am also an avid backpacker and hiker, the trails, mountain passes, river valleys, and peaks of Colorado truly represent a Shangri-La for butterfly adventurers like me. I had earlier compared my road trip from California to the pursuit of Oz along the Yellow Brick Road, and now that I found myself within the Emerald City (aka Colorado), I was anxious to see what treasures I might find within its boundaries.

As anyone who has attempted to chase butterflies in the Rocky Mountains can attest, the weather can prove to be the biggest obstacle. Though the sun was often shining brightly each morning in Denver, I knew that my collecting opportunities would typically be short-lived, as the Continental Divide quickly produces its own weather. Clouds begin forming along the highest peaks by 10:00 a.m., and it is not unusual for entire areas to be completely obscured by clouds by noon. Such cloud cover is typically accompanied by rain and lightning - an especially challenging (and dangerous) situation when you're exposed on some mountain top above 12,000 feet wearing skimpy clothing and holding an aluminum net pole. Over the course of the week this would prove to be the case again, but by some miracle, I managed to wallow in sufficiently sunny skies each day – sometimes until well past noon. Below I have revisited some of my favored moments from my delightful week in Oz.

Day 1: Bushwacking on Berthoud Pass

I arose early the morning of July 23, 2012, kissed my sleeping children, and headed down to meet my fellow LepSoc adventurers in the lobby of the Red Lion Hotel in Denver, Colorado. Specifically, I was scheduled to join a group of collectors into the higher elevations of the Rocky Mountains - led by Steve Spomer, a long time Internet friend whom I was anxious to finally meet in person. As I arrived, I was met by a diverse and growing assembly of entomologists and butterfly enthusiasts donning hiking boots, cargo pants, collecting vests, sunblock, mosquito repellant, walking sticks, cameras, insect nets, binoculars, broad brimmed hats, and pith helmets. A heartwarming sight indeed, though the spectacle likely left many other Red Lion guests scratching their heads. The bustling crowd actually represented several coordinated groups – each equipped with its own fearless leader and assigned to its own special destination.

Welcome to LepSoc field days, one of the most exciting aspects of the annual meeting of the Lepidopterist's Society. I had eagerly signed up for three such daylong adventures scheduled over the course of the weeklong meeting, even though I had just completed a marvelous 4 day Yellow Brick road trip with my children that already included some high altitude Rocky Mountain butterfly study. Of course I am always keen on visiting new alpine locations, and captivated by the prospects of making new discoveries, but in this case I was especially thrilled to engage in my passion with like-minded companions.

As I greeted the crowd, I immediately recognized some familiar faces – and spent the first 15 minutes reuniting with friends in grand fellowship. There was Todd Stout, and Andy Warren, and James Adams, and Jonathan Pelham –my quintuplet brothers from different mothers.

James Adams, Mark Walker, Jonathan Pelham, and Andy Warren (munching on a bromeliad) (photo by Todd Stout)

Tom Horton (Nice license plate!) (photo by Todd Stout)

Tom Horton and I reunited and, realizing we had scheduled the same field trips, arranged to carpool together in his Jeep. I also took the opportunity to meet some new friends – another highlight of the annual meeting. We chatted about all manner of things, and the lobby was soon abuzz with a rich dialogue. Though it seemed there was no shortage of stimulating topics for discussion, soon it was time to cease our socializing and launch our caravan on its way up to Berthoud Pass. Time was a wasting, as was the availability of blue skies.

Berthoud is a compelling butterfly destination for several reasons. Not only does it sit at 11,500 feet above sea level, it also sports a variety of habitats, crests the Continental Divide, supports many options for hiking, is an hour from Denver, and provides for some spectacular views. One of the species I was really interested in finding was *Lycaena cupreus snowi*, the Rocky Mountain version of the familiar and stunning Sierra Nevadan Lustrous Copper. But I was not all too hopeful, as earlier reports from Colorado suggested that cupreus was mostly finished with its flight. After arriving, our collecting group quickly dispersed in every direction. Due to my objectives I was principally interested in reaching higher elevations, but even this option required exercising a choice. Tom and I quickly surveyed the situation and decided to head across the highway in order to ascend the ridge west of the pass. Not wanting to waste any time, we chose a path that provided steepest ascent – though this choice provided no trail.

This turned out to be a less than optimal decision, as the slope was exceedingly steep. Thanks to recent hiking, my legs and heart felt strong, but the elevation quickly went to my head and soon I was gasping for air. As I stood there panting with ankles twisted by the angle of elevation, it was only fitting that I would see my first butterfly – a fresh *Speyeria mormonia*, bounding erratically. In a spurt I dashed across the slope, waving my butterfly net madly, but I soon collapsed, with eyes bulging out, and found myself flat on my backside. I thought I could hear the butterfly laughing, but perhaps it was just the altitude playing tricks on my scrambled brains.

This turned out to be a familiar course of action for the rest of the morning. I realized that I was not going to get to the top if I continued the aimless pursuit of butterflies, and so with great difficulty I blocked out the occasional flashes of orange, blue, and white so that I could concentrate on putting one foot in front of the other. Though progress was slow, I finally managed to crest the first false peak – feeling some degree of satisfaction in the achievement. I turned to see how Tom was doing, but soon realized that Tom had chosen not to follow me. Smart man.

Though satisfied with the climbing, I was pretty disappointed with the paucity of butterflies. Yes, there were good numbers of *Speyeria mormonia*, occasional *Parnassius smintheus*, and a handful of *Plebejus glandon*, but sadly there was little else to get excited about. At one point I ran awkwardly after a lone *Pyrgus*, but this turned out to be typical *communis* (Common Checkered Skipper).

I spent a few moments on top looking for signs of hilltopping, finding an occasional *Erebia callias* (Colorado Alpine) and *Colias meadii* (Mead's Sulphur). I then glanced around for signs of Tom, but there was still no sign of him or any other person. I could see that the weather was already changing for the worse, and recognized that I might only have another hour before the rains came. Assessing my options, I saw even higher peaks to the west with nearly vertical faces. These might be approached by climbing their shoulder which was reasonably accessible from where I was standing, about ¼ mile farther uphill. Fortunately, the slope in front of me was tamer, and the flora still sparse, making the walking less difficult. I was sad to have lost Tom, but my deep desire to make discoveries pushed me forward. After another 15 minutes I found myself approaching the rising shoulder that would get me to the highest peaks, but of course up close I could see that they were far more substantial than I had first thought. So I paused and considered other options.

I looked around and saw below me the origins of a flowing valley, fanning out from the base of the highest peaks. I could see much water below, and the valley appeared lush and alive – a tempting option, if not for the steep slope downward. Though traversable by foot, once down I would face two options: I would either have to climb back up, which at the moment was unthinkable, or head downstream, which curved around and out of sight, heading in a direction contrary to getting back to Berthoud Pass. I glanced again at the highest peaks, but concluded that it might take me the rest of the afternoon to reach them. My ride was nowhere in sight and I realized it was pretty inconsiderate to simply disappear for so long. "Heck, I might end up having to walk all the way back to Denver if I choose that option."

As I examined the terrain I could also see what appeared to be a decent talus field – a slide of huge boulders that sloped downward from the peaks towards the base of the valley. It appeared as though I could access this field directly if I traversed the slope at my present elevation. I chose this option, but as I started across the rocky terrain I started kicking up grayish blue butterflies that darted off and then quickly back to the ground. These looked different from everything else I had seen, and so I spent a few minutes focusing on trying to track one down. I did so with some difficulty, and found them to be female *Plebejus shasta* – a delightful new addition for the trip. These captivated my attention for a while, but the increasing cloud cover really interfered with this strategy. I needed to do something quickly – something that would lead to better collecting opportunities before all opportunities disappeared entirely.

Suddenly from behind I saw a man approaching. It was Steve Spomer, who had apparently had similar temptations! I waved at him with my net.

"I was hopeful", I explained as he arrived, "but there's not much up here". And further, "I've been chasing Colorado Alpine's and Shasta Blues, but they're good at eluding my net". As it turns out, Steve actually followed a trail to this spot – completely avoiding the steep slope I had attacked with stupidity.

"It looks pretty good down there", Steve said, pointing to the valley below.

"Yeah, it does – but I've been hesitant to descend, lest I have to come back up again".

Steve surveyed the situation, commenting that perhaps it was possible to reach highway 40 downstream from the canyon somewhere as the highway drops down from the pass to the north. I shrugged my shoulders as I once again pondered the pains associated with recovering unnecessary lost elevation. I poked around the alpine slope, chasing another Shasta Blue, but when I turned around again I could see that Steve was already half way down towards the bottom of the lush valley.

"Oh what the heck", I thought. It did look very nice down there. I looked up and saw that the skies were even more obscured, and portions of the valley below were already fully shaded. If I was going to find anything, I only had a little while to do it. So, reluctantly, I started heading downhill. The hard truth was that it was worth having to climb back up this slope if it meant I might get a chance to chase butterflies for even 30 minutes. Before I knew it, Steve was already at the bottom some 400 feet below me, and suddenly I saw him take off running. Butterflies! So downhill I bounded.

Once at the bottom, it was magical. "*Boloria chariclea*'s flying", Steve announced as I finished my descent. Cool. There were also many sulphurs, including *Colias scudderi*, *C. meadii*, and *C. philodice*. Steve even caught a *Pieris rapae* (Cabbage White), something that stunned the both of us. There were also fresh *Polygonia gracilis*, an occasional *Vanessa atalanta*, and a population of *Plebejus saepiolus* (Greenish Blue). After about 20 minutes of chasing through the wet, spring fed meadow and alpine creek, the sun began to become obscured. This abruptly sent most of the flyers heading for cover.

We noticed that there was a patch of sunlit habitat some 200 yards downstream, and without hesitation we began to head in that direction. I glanced back up to the ridge I'd descended, but I already knew what butterflies I wouldn't find along that route, and besides – how much trouble could I get into hiking with the trip leader? If we didn't manage to get back to civilization until after nightfall, at least I wasn't alone or in bad company. Besides, there could still be interesting butterfly discoveries to be made in the canyon below.

As it turns out, our canyon did wind down to a road, but it was not the highway – but an unpaved forest road. The sun continued to play hide-and-seek all along the way, but even a brief momentary stint of direct sunlight was sufficient to bring out the flyers in numbers. It produced quite a cat-and-mouse game, but we were delighted to be "among 'em", even if for just moments at a time. Once we climbed out onto the forest road we managed to find our way back to the highway, as the forest road connected to it ½ mile below the pass. It was here, of all places, along that dirt road with disturbed hillside that I encountered my first *Lycaena cupreus snowi*. Meanwhile, Steve found *Polites draco* perching on the roadside. These were nice additions to our species list and made the chosen detour well worth the effort.

When we got back to the Berthoud Pass parking lot we were plenty exhausted. I was pleased to find Tom's jeep still parked there and wondered if he'd ever speak to me again. As it turns out, Tom did hike up to the top of that ridge (following the trail – doh!), but I'd been too impatient to wait for him. But like a seasoned lepidopterist, Tom found other places to search, making his own fulfilling discoveries. We sat down, enjoyed a cold beverage, and compared notes while the last of the sunshine slowly evaporated. Within minutes the rains came, and then the hail. It was past 2 p.m. and somehow we'd managed to beat the weather on this, our first LepSoc field day.

As we headed into Denver, we broke through that cloud cover and found ourselves back in sunshine. Tom and I exchanged glances and decided with few words to consider exploring these lower elevations, even though it was pushing 4 p.m. After little success on Dinosaur Ridge, we poked our heads down into a small creek and spooked several gorgeous *Cercyonis pegala* out from the underbrush. These and some nectaring *Papilio multicaudata* made for a fitting end to a wonderful day.

Day 2 & 3: Fritts and Crysalus Redux

On Tuesday Tom and I met again in the lobby to join Steve Spomer's group – this time to lower elevations located along highway 67 and the South Platte River. Our first destination was Indian Creek Campground, where mixed conifer and deciduous forest provided some promising opportunities. Unlike Monday, Tuesday started out with inclement weather. We arrived a tad bit early and it took 30 minutes or so for the butterflies to stir, but after that we managed to find good numbers of the unsilvered *Speyeria hesperis*, along with fresh *Speyeria aphrodite*. Also common here were tons of *Cercyonis oetus*. I even collected a fresh male *Satyrium saepium*, which I didn't even know was resident in Colorado. Soon the bleak weather and the desire to visit other, perhaps more productive locations, prompted us to pick up and head farther along highway 67 to Sugar Creek. Sometimes overstaying a location is the worst thing you can do. Other times, leaving too early proves to be the bigger offense. What to do?

But Sugar Creek is Andy Warren country, and he had sent me here years before in October, at which time I was astonished to find Cercyonis meadii still flying. It's a beautiful area, and though the cloud cover continued to annoy and interfere, we found lots of nectar and good numbers of butterflies going to it whenever the sun chose to shine. Large stands of thistle were especially good magnets here, and as the group fanned out up and down the dirt road, it was not uncommon to stumble on plants hosting four different species of *Speyeria*. Those included *Speyeria aphrodite*, the ever showy *S. coronis*, the now familiar unsilvered *S. hesperis*, and the spectacular *S. edwardsi,* sporting its greenish ventral hindwing ground color. We saw lots more *Cercyonis oetus*, but it wasn't until after we'd been there 30 minutes that I finally bothered to net one - only to find that it was an immaculate *Cercyonis meadii*, complete with bright orange-red eye spot borders. My October specimens were badly worn (though still very special to me), but these July butterflies were simply stunning. Needless to say, after that I and everyone else began taking closer note of everything we saw flying.

While combing along the shrubs I managed to find other nice additions to the species list – including *Lycaena arota* (Tailed Copper) and *Callophrys affinis homoperplexa* (I didn't expect any greenies to still be flying), along with various skippers. Unfortunately, while walking the road at Sugar Creek the weather continued to worsen. Again, we decided to leave with the hopes of other locations being more productive. This time we ended up near Deckers, up another creek that feeds the South Platte. Here we found some success, with larger numbers of *Lycaena arota* and another good flight of *Cercyonis meadii*. We also found some more *Speyeria* and *Phyciodes*. However, after about an hour it was clear that we were just about finished. Tom and I decided to head back and prepare for the upcoming reception.

Cercyonis meadii from Sugar Creek & YMCA Camp, Dexter, Douglas County, CO, July 25, 2012 (photo by Koji Shiraiwa)

The next day Tom and I were still jonesing for some adventure. We chatted with Todd Stout, who was principally interested in going out for low elevation butterflies – and was fairly captivated by our reports from highway 67 and Sugar Creek. So our plan was to head back and retrace our steps from Tuesday. One of the things that especially intrigued me were the reports that *Hypaurotis crysalus* (Colorado Hairstreak), another butterfly on my short list (and one which has long evaded me), was supposed to fly among the Oaks at the entrance to Indian Hills Campground. This is precisely where I found the Hedgerow Hairstreak from the day before, and I'm certain I didn't see anything close to resembling a Colorado Hairstreak, but the idea that I was smack in the middle of its habitat and hadn't actually tried searching for it really bothered me.

Mark Walker and Todd Stout (photo by Tom Horton)

Hypaurotis crysalus from Indian Creek Campground, Douglas County, CO, July 25, 2012 (photo by Koji Shiwaira)

When we arrived it was clear that the weather would interfere once again with our grandest of plans. Nevertheless, we would not leave Indian Creek Campground without making a concerted effort for finding *H. crysalus*. To do this, especially under mostly cloudy skies, we needed a tag team. One person to bang the base of the Gamble Oak trees, another to spot what flies out, and the third to go and capture it with a net before it heads back into the safety of the tree. This technique can be quite successful, assuming there are in fact butterflies – and that you are not always stuck being the tree banger. Surprisingly, it did not take us that long to shake out our first Colorado Hairstreak. As the day warmed a bit, this technique proved even more successful. Before long, each of us had rotated enough to paper three or four specimens – mostly worn, but some surprisingly fresh. I was astonished that I had been here the day before and completely missed them. Doh! The fact that they can reliably be found even when the weather is unfavorable is especially noteworthy.

We also re-visited Sugar Creek and enjoyed some of the same gorgeous Fritillaries. The weather worsened again, and this time the three of us were content to head back and grab some much needed food. Three days of intense butterflying had caused me to ignore the basics of nutrition. However, in just three days I had already checked off two of my target butterflies – and had engaged in some wonderful butterfly fellowship. Who needs food?

On our return trip to Denver we decided to stop back at Indian Creek Campground to see if we couldn't shake out another hairstreak or two. It was already around 4 p.m., but the sun was now beginning to peak below the cloud cover, providing for some direct illumination. It turns out that even a small patch of sunlit leaves provides sufficient attraction for a Colorado Hairstreak. Sure enough, on the few leaves that were warmed by direct sunlight, we found more Colorado Hairstreaks. We also vouchered a couple of male *Euphyes vestris*. Another wonderful day in Oz.

Day 4: Rolling over Rollins

Tom and I decided to spend our 4th day striving again for higher elevation. This time, with the help of some much needed and appreciated advice, we targeted Rollins Pass (off highway 119) which sits right at the intersection of Grand, Boulder, and Gilpin counties. Though the word was now out that many of the high elevation butterfly delicacies were past their flights, we were intent on giving it another try. Our adventure started in the quaint little mountain village of Rollinsville, where we gassed up the Jeep and ate a hearty breakfast. From here the path was mostly unpaved, which was easily doable in Tom's 4WD vehicle, but it was long and somewhat arduous. Several times we were tempted by roadside flyers, but the desire to reach high elevation – coupled with the knowledge that the blue sky we were enjoying would certainly be short lived – compelled us to push on.

Rollins Pass (photo by Tom Horton)

Once above tree line, the views were beyond spectacular. We decided not to waste any time and jumped out of the Jeep to do some exploring. Right away we saw many butterflies, including plenty of Lycaenids. One of the most common butterflies around Yankee Doodle Lake was *Lycaena helloides* (Purplish Copper), although they appear quite dark at this elevation and could very well be something other than helloides. Its cousin, *Lycaena rubidus*, was also common here – the females quite spectacular. Sadly, all attempts to locate more *Lycaena cupreus* were foiled. With all the other coppers, I was somewhat surprised not to find at least some Lustrous on the wing.

We also found lots of blues, including *Plebejus glandon* and *saepiolus*. Once again we found lots of *Erebia callias* (Colorado Alpine), which seemed to be having good flights at every high elevation spot we visited. Also reliable at elevation were *Speyeria mormonia, Parnassius smintheus*

(Rocky Mountain Parnassian), and *Colias meadii* (Mead's Sulfur). Another special treat on Rollin's Pass was the spectacular *Erebia pawloskii* (Theano Alpine). These were scarce and not easy to distinguish among the hundreds of *callias*. I've dreamt of this butterfly.

Erebia pawloskii from Rollins Pass, Boulder County, CO, July 26, 2012 (photo by Koji Shiraiwa)

The wet areas around Yankee Doodle Lake also provided our first recorded *Erebia epipsodea* (Common Alpine), it's scarcity a bit of a surprise. We also hiked several miles above the lake to comb the talus and alpine mountain tops, producing good numbers of *Colias alexandra*. The females of Queen Alexander's Sulphur are delicate and a beautiful pale yellow-white, the undersides greenish with very faint and unbordered eye spots. Not much else was found up higher, but we decided to hike cross country, back over a high ridge, and then drop back down (a rather treacherous option) to Yankee Doodle Lake. It was up high on the north facing slopes of this mountain that we found a small flowering plant growing down among the talus which provided a decent nectar source. To my great pleasure, we found this nectar was attracting *Lycaena cupreus*. That's two high mountain passes that produced *cupreus* – I was jazzed.

We must have hiked over 10 miles all around the Rollins Pass area. The sun did not really disappear until well into the afternoon, but we were pretty exhausted and felt we had vouchered everything that was distinct (save for one large *Speyeria*, not *mormonia*, that kept eluding me).

On our long and winding drive down the pass we managed to drive out once again from under the billowing clouds. This allowed for a few opportunistic stops whenever we found nectar and a place to pull over. At these lower elevations we found *Limenitis weidmeyerii* and a lot more *Lycaena helloides*. At one particular spot we crossed into a flyway for *Colias scudderi* (Scudder's Sulphur). They were coming up the slope at a rate of about 5 per minute – 5 males for every female. Awesome.

Our day on Rollins would not be soon forgotten. Tom was soon to depart Colorado, and so we shook hands and lifted another cold beverage. My collecting future has space permanently reserved for Tom.

Day 7: Cottonmouth on Cottonwood

So after four days of field work, I took a two day reprieve and actually sat in on lots of good paper presentations. On Saturday, with all my children AND my wife now present in Denver, I was obligated to put my net down for a while. But then Sunday came, and it was off again to high elevation. This time I would join Paul Opler and his wagon train up to Cottonwood Pass. I was delighted.

Cottonwood Pass is much farther than the other destinations - way off down near Buena Vista, Colorado on the border between Gunnison and Chaffee counties. The drive up the pass (which sits just above 12000 feet) is as spectacular as ever, and once on top our group once again spread out quickly over the vast terrain. My preference (guided by advice from my new friend Steve Fratello) was to head over the 12,250 foot ridge to the north of the pass and drop down into a very lush steppe that spills down into a rather large river gorge. To get there, I had to first climb over the high ridge – which gave me the opportunity to see if there was anything of interest among the talus fields that were strewn about the lunar landscape. The species on top were predictable now, with *Erebia callias* and *Speyeria mormonia* dominating – and good numbers of *Parnassius smintheus, Colias meadii,* and *Plebejus glandon* abounding. After a few short minutes I had seen enough and continued over the top.

As I dropped into the lush terrain to the north, I quickly became inundated by marshland. The whole upper edge of the valley was soaking wet and covered by thick brush that made it nearly impossible to traverse. It was also full of mosquitoes. After wrestling through the bushes and occasionally sinking to my ankles, I decided to head northwest along the base of the ridge where there was actually a trail. What a concept! I hadn't spent much time on trails over the course of the week, and I found it a welcome change. From here it was easier to go into the wetter areas whenever I saw something of interest flying. The most interesting butterflies here were *Lycaena helloides* (just emerging and having a decent flight) and *Plebejus saepiolus* (more scarce, but common in the right areas). There were occasional sulphurs, but these were nearly impossible to net and identify across the vast wet and open area.

Finally, after hiking about a mile, I decided to make my way up to the top of the ridge once again. This was not a simple task, as the ridge had now risen to 12,500 feet, and towered 500 feet directly above me. The climbing was

slow and the collecting very constrained, but I managed to get to the top – which was among the highest peaks in the surrounding area. The slopes were completely void of anything but ground hugging plants, but it offered very good 360 degree views of the terrain below, and allowed me to choose my next options more effectively. Unfortunately, the whole affair made me very thirsty and, though I reserved my water carefully, soon my tongue was stuck to the roof of my mouth.

I spent many hours walking the surrounding terrain. After some time I was joined by another group member who met me on top, and the two of us combed very carefully over the entire area for any signs of something special. We did manage to find *Plebejus shasta* here, zipping about among similar looking habitat as Steve Spomer and I found above Berthoud Pass. We also found several well hidden tarns which supported surprising numbers of nice butterflies. Here we found *Boloria chariclea, Colias scudderi, Colias meadii*, and shazam! More *Lycaena cupreus*! This was my third Colorado Pass in a week that produced the Lustrous Copper (my target insect) – and even though all proved to be well past prime, I was elated.

From here the two of us walked back across the ridge, making our way slowly back down to the parking lot at the pass. The day was waning fast, and now (finally) the clouds were beginning to dominate. As we walked along this south facing slope we found dozens and dozens of *Parnassius smintheus* sailing uphill, including ovipositing females. It was quite late when we returned, and I was happy that Paul and Evi were still waiting – though I suspect my incessant quest qualified as being inconsiderate.

My LepSoc field days in Oz ended with a delightful ride back to Denver sitting next to the affable Charlie Covell, one of my greatest personal Lepidopterist heroes. I was truly in Lep Heaven. The 2012 meeting of the Lepidopterists' Society had officially come to an end – but shucks - I was still over 1000 miles from home. My wife and children would board an airplane in the morning (I guess no one was that interested in joining Dad for another butterfly roadtrip), and I was flying off to Orlando, Florida for work. Ah, but my car would remain at the Denver International Airport, awaiting my return on Thursday morning – August 2. I still had more adventures to look forward to!

National Moth Week 2012

Continued from p. 20

National Moth Week team members, from left to right: Dan Ford, Todd J. Dreyer, David Moskowitz, Liti Haramaty and Elena Tartaglia.

Acknowledgment

The success of the first National Moth Week is due to many individuals and organizations around the world. First and foremost, are the National Moth Week Board members, Todd J. Dreyer, Elena Tartaglia and Dan Ford who gave countless hours to the project. Without their work, the event would never have achieved the success or accomplished the goals it did. We also cannot adequately express how important our Partners and Sponsors were to the success of National Moth Week, especially Nancy Lowe and John Pickering from Discover Life, Yasser Ansari, Jacob Gorneau and Karen Loughrey from Project Noah, Kelly Lotts and Thomas Naberhaus from BAMONA, John VanDyke from BugGuide and the Lepidopterist's Society, Great appreciation is also due to all of the individuals and organizations that helped promote the event in so many ways. The measure of their success is in all of the moth nights and programs that enriched anyone attending and the scientific contributions that were made. A huge thank you is also due to the authors that generously donated books for National Moth Week. We also thank EcolSciences, Inc. and the Friends of the East Brunswick Environmental Commission for providing resources and support. And finally, we would like to thank all of our friends and family for their constant support even when every conversation turned to National Moth Week.

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Step out of the Willow bogs and find some dead trees:

Colias scudderi (Lepidoptera: Pieridae: Coliadinae) and Lodgepole Pine forests in Colorado

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Visitors to Colorado are often shocked when they reach the higher altitudes of the Rocky Mountains to find hillsides covered with dead and dying lodgepole pine trees (*Pinus contorta* Douglas) as far as the eye can see. Lodgepole pines are a dominant forest tree in many parts of central and northern Colorado, usually growing between 8000' and 10,500' elevation. Beginning in the mid-1990's, the native mountain pine beetle (*Dendroctonus poderosae* Hopkins), which infests and kills lodgepole and other pines, began an outbreak cycle in Colorado, enabled in part by decades of fire suppression in western lodgepole pine forests resulting in vast expanses of extremely dense forests. This outbreak became widespread in the drought years of 2000-2004, and by 2006, the beetle had infested over 660,000 acres of lodgepole pine forests in Colorado, or nearly half of the lodgepole pine forest in the state (CSFS 2006). Since 2006, the beetle infestation has continued to spread, not just in Colorado, but in many western states. In Colorado, lodgepole pine mortality is most prominent in the north-central part of the state, especially in Eagle, Summit, Grand, Jackson and Routt counties.

Since 1992, before the beginning of the current mountain pine beetle outbreak, I've been monitoring the butterfly fauna of the Vazquez Mountains of southern Grand County, Colorado. While informal and opportunistic, this survey has enabled me to document some dramatic changes in the regional butterfly fauna associated with the dying lodgepole pine forests. Early in the mountain pine beetle outbreak, I predicted that some butterfly species would be "winners" and some would be "losers" as a result of the rapidly changing habitats. The death of the lodgepole pines has resulted in the proliferation of understory plants, as the former densely shaded habitats have become largely open and sunny. One butterfly that clearly has suffered from this is *Oeneis jutta reducta* McDunnough, whose preferred habitat of dense, shady lodgepole pine forests has now all but disappeared from the state. As of 2012, small numbers of *O. j. reducta* were still present in the Vazquez Mountains, where the butterfly used to be common, although the future of this species in the region remains uncertain. However, the large increase in partly open, sunny habitats has benefitted many butterfly species, which have become much more abundant in the region over the past two decades. Details on the trends for various butterfly species will be presented in a future publication; here I will focus primarily on just one of the butterflies which has displayed an unexpected dramatic proliferation following the mountain pine beetle outbreak and subsequent loss of dense lodgepole pine forests.

Figure 1. Male of *Colias scudderi* resting on *Lathyrus*, among a dense stand of *Vaccinium caespitosum* in a decaying lodgepole pine forest; USA: COLORADO: Grand County: Vazquez Mountains, July 6, 2012 (photo by Andrew D. Warren).

Colias scudderi Reakirt (Fig. 1) occupies mid- to high-elevation habitats in the southern Rocky Mountains of northern New Mexico, much of Colorado, the Uinta Mountains of Utah, and the Medicine Bow and Laramie Mountains in southern Wyoming. Despite being widespread in this region, details of its ecology and life history have remained poorly understood. Its preferred habitat is almost universally stated to be willow-dominated (*Salix* L. spp.) habitats (Fig. 2), often "willow bogs" (e.g., Brown et al. 1956, Scott 1986, Fisher 2012), and the butterfly is usually thought to be uncommon; Brown et al. (1956) noted that "three or four specimens is a good day's catch under average conditions," and Fisher (2012) stated it is "never found in great numbers." Its presumed close association with *Salix* has even earned *C. scudderi* the common name of Willow Sulphur (e.g., Scott 1986), although it is more commonly called Scudder's Sulphur (e.g., Warren et al. 2013). However, for over one hundred years, reports have existed of *C. scudderi* utilizing *Vaccinium* L. species as an oviposition substrate and larval foodplant in Colorado. William H. Edwards (1892) reported observations (by D. Bruce) of *C. scudderi* ovipositing on *Vaccinium*. Ae (1958) reported oviposition and larval feeding of *C. scudderi*

Figure 2. Willow (*Salix planifolia*)-dominated habitat normally depicted as a "typical" habitat for *Colias scudderi*. *Vaccinium caespitosum* is also very common here, in shaded areas under willow bushes and spruce trees; USA: COLORADO: Clear Creek County: N slope Loveland Pass, NW of Summit, ca. 11,600', July 5, 2012 (photo by Andrew D. Warren).

on *Vaccinium*, and Scott (1992, 2006) noted multiple ovipositions on and near *Vaccinium*, and noted (1992) that *C. scudderi* feeds "well" on *V. caespitosum* Michx. Hammond & McCorkle (2008) noted observations by J. Wolfe and J. Harry indicating that *Vaccinium* was the most frequently used oviposition substrate for *C. scudderi* in Utah. While *C. scudderi* reportedly uses *Salix* as a larval foodplant in some instances, willow may not be the preferred or most widely utilized larval foodplant in many or most situations.

Growing up in Colorado, my experience in searching for *C. scudderi* basically reflected Brown et al's (1956) and Fisher's (2012) belief that the species was generally scarce. Despite incalculable hours spent in ideal-looking (according to the literature) riparian situations dominated by willows, no more than a few individuals of *C. scudderi* were found at any time. However, individuals of *C. scudderi*, usually females, were occasionally found out of their habitat (again, according to the literature), usually in dense lodgepole pine forests with no willow anywhere in sight (and few other butterfly species present). I first observed this in 1993, when I found a handful of males and females of *C. scudderi* in the Vazquez Mountains of Grand County, along the edge of a dense lodgepole pine forest with no willow present, but the species was rare there at the time. In 1994, on a trip with Ray Stanford to the Elkhead Mountains of Moffat County, Colorado, we found a few females of *C. scudderi* in the understory of lodgepole pine forest, in an area dominated by *Vaccinium caespitosum*, with no willow in sight. Similar experiences through the late 1990's and 2000's reinforced the idea in my mind that *C. scudderi* must use *V. caespitosum* as a larval foodplant. Other Colorado Lepidopterists have come to the same conclusion; Scott (2006) stated that *Salix planifolia* Pursh, *Vaccinium caespitosum* and *Polygonum viviparum* L. "are hostplants of this polyphagous butterfly."

The great extent to which *C. scudderi* utilizes *V. caespitosum* became apparent to me in 2011 and 2012. In the Vazquez Mountains of Grand County, *V. caespitosum* has become one of the dominant groundcovers in the understory of the beetle-infested lodgepole pine forests (Fig. 3). With the opening of the canopy, *V. caespitosum* plants have not only become more numerous, but older plants still receiving some shade from dead timber (Fig. 3) have often grown

Figure 3. Stand of decaying lodgepole pines with dense understory of *Vaccinium caespitosum* (bright green vegetation near center of understory and beyond) and other plants, but willow is absent. *Colias scudderi* was extremely abundant here in 2012; USA: COLORADO: Grand County: Vazquez Mountains, July 6, 2012, (photo by Andrew D. Warren).

into shrubs, forming extensive stands in many areas, sometimes with very few additional groundcover plants. Corresponding with this proliferation of *V. caespitosum* was the arrival of *Boloria chariclea helena* (W. H. Edwards). This taxon, clearly using *V. caespitosum* as the local larval foodplant (also see Scott 1992), was never detected at the study sites in the Vazquez Mountains in the 1990's, but by 2012 was generally the most abundant butterfly, with hundreds observed each day. Similarly, *C. scudderi* has gone from being very rare in the Vazquez Mountains in the 1990's, to being one of the more abundant butterflies.

Three days in 2012 were dedicated to studying *C. scudderi* in the Vazquez Mountains, with increasing focus on *V. caespitosum*-dominated areas each day. On July 4th, all accessible habitats in the region were surveyed for *C. scudderi*, with adults common only in areas of dead timber that were formally dense stands of lodgepole pines. In all such areas, *V. caespitosum* was the dominant ground cover, and no willow was apparent. Despite no special focus on *Vaccinium*-dominated areas (only about an hour and a half was spent among stands of *Vaccinium* plants), over 50 male and over 30 female *C. scudderi* were recorded. This was the most abundant I had ever observed *C. scudderi* to date. A return visit to the site on July 6th was unfortunately met with poor weather. Heavy rain the night before left the vegetation completely drenched, and upon arrival, the site was covered in a dense fog. Once the fog and clouds cleared, only about an hour and a half of intermittent

sunshine was available to bash though the wet vegetation in an effort to flush adults, but all the time was spent in *Vaccinium*-dominated areas. Despite the poor conditions, about 40 male and 15 female *C. scudderi* were recorded, some of which were still covered in water droplets, perched among the needles of young lodgepole pines, where they apparently spent the previous rainy afternoon and night. Others could be seen from many meters away, as small yellow orbs basking on a sea of green *Vaccinium* foliage. A final visit was made to the *Vaccinium*-dominated habitats in the Vazquez Mountains on July 9th. This time, the weather was perfect upon arrival, and four hours were spent among the same *Vaccinium* patches as on July 6th. As expected, *C. scudderi* was extremely abundant, roughly tied with *B. chariclea* as the most abundant butterfly in the habitat. Over 100 males and roughly 75 females of *C. scudderi* were observed in these four hours. Stops at several additional sites in the Vazquez Mountains later that day yielded *C. scudderi* in large numbers in every former densely forested lodgepole pine habitat now dominated by *V. caespitosum*. Over 200 *C. scudderi* were observed on July 9th in the Vazquez Mountains, and at none of the sites was willow apparent, beyond an occasional solitary bush or isolated stand later in the day on the 9th. Thus, the primary or only larval foodplant for *C. scudderi* in the Vazquez Mountains, where it does not use *Salix*, appears to be *V. caespitosum*; it is likely that this plant is also the primary larval foodplant in many other parts of the range of *C. scudderi*, as almost all willow-dominated habitats where *C. scudderi* is found also contain significant amounts of *Vaccinium*. Lepidopterists are encouraged to take the time and look around for *Vaccinium* the next time you encounter *C. scudderi*, even if willows or other reported foodplants are present. Hopefully, future researchers will investigate this issue in greater detail, to determine the extent to which *C. scudderi* utilizes *Vaccinium* versus *Salix* and other potential larval foodplants. Looking back, I can't recall ever having found *C. scudderi* far away from *Vaccinium*, although that certainly cannot be said for *Salix*.

The realization that *C. scudderi* is polyphagous and could even prefer *Vaccinium* as a larval foodplant may have taxonomic implications. Klots (1975) and Ferris (1987, 1988) defined the *Salix*-feeding and the Ericaceae-feeding groups of *Colias* based on presumed larval foodplant usage, and both authors included *C. scudderi* in the willow-feeding group. However, the distinction between these groups becomes blurred when *C. scudderi's* apparent use of *Salix* and *Vaccinium* is considered. Scott (1986) and Hammond & McCorkle (2008) consider *C. gigantea* Strecker to be a subspecies of *C. scudderi*, yet all *C. gigantea* populations are thought to be monophagous on *Salix*. The significance of this is open to debate, but this does contrast with the ecological strategy of *C. scudderi* in its widespread use of foodplants in families other than Salicaceae. We now know that *C. scudderi* and *C. gigantea* often occupy very different habitats, especially where *C. scudderi* flies in current or decaying lodgepole pine forests. The apparently widespread use of *Vaccinium* as the larval foodplant, in association with non-riparian habitats, at least in northwestern Colorado but likely much more widespread, suggests that *C. scudderi* could actually be more closely-related to other *Vaccinium*-feeding *Colias* species than to *C. gigantea*, as hypothesized by Brown et al. (1956). It is hoped that future studies will shed light on the relationships between these morphologically similar *Colias* taxa.

Acknowledgements

Thanks are extended to Sally Warren, Joel Cox, William Bernstein and Tom Ortenburger for help with fieldwork in 2011 and 2012, to Todd Stout for information on *C. scudderi* in Utah, and to Paul Severns and Jonathan Pelham for valuable comments and suggestions that improved this article.

Literature Cited

Ae, S. A. 1958. Comparative studies of developmental rates, hibernation, and food plants in North American *Colias* (Lepidoptera, Pieridae). American Midland Naturalist 60(1):84-96.

Brown, F. M., D. Eff & B. Rotger. 1956. Colorado butterflies, Part 4: Pieridae and Papilionidae. Proceedings of the Denver Museum of Natural History 6:177-238.

Colorado State Forest Service (CSFS). 2006. 2006 Report on the Health of Colorado's Forests- Special Issue: Lodgepole Pine Forests. Colorado Department of Natural Resources, Division of Forestry, Denver, Colorado. 24pp.

Edwards, W. H. 1892. Miscellaneous notes on butterflies, larvae, etc. Canadian Entomologist 24(3):49-56.

Ferris, C. D. 1987. A revision of the North American Salix-feeding *Colias* species (Pieridae: Coliadinae). Bulletin of the Allyn Museum 112:1-25.

Ferris, C. D. 1988. Revision of the North American Ericaciae-feeding *Colias* species, (Pieridae: Coliadinae). Bulletin of the Allyn Museum 122:1-34.

Fisher, M. S. 2012. The butterflies of Colorado. Pieridae and Papilionidae- part 5. The Whites, sulphurs and swallowtails. Lepidoptera of North America 7.5. Contributions of the C. P. Gillette Museum of Arthropod Diversity, Colorado State University, Fort Collins. iv + 192pp.

Hammond, P. C. & D. V. McCorkle. 2008. A review of geographic variation and possible evolutionary relationships in the *Colias scudderi-gigantea* complex of North America (Pieridae). Journal of the Lepidopterists' Society 62(4):201-215.

Klots, A. B. 1975. Genus *Colias* Fabricius, pp. 354-367. *In*: Howe, W. H. (Ed.). Butterflies of North America. Doubleday & Co., Garden City, New York. xiii + 633pp.

Scott, J. A. 1986. Butterflies of North America. A Natural History and Field Guide. Stanford University Press. xv + 583pp.

Scott, J. A. 1992. Hostplant records for butterflies and skippers (mostly from Colorado) 1959-1991, with new life histories and notes on oviposition, immatures, and ecology. Papilio (new series) 6:1-171.

Scott, J. A. 2006. Butterfly hostplant records, 1992-2005, with a treatise on the evolution of *Erynnis*, and a note on new terminology for mate-locating behavior. Papilio (new series) 14:74pp., cartoon.

Warren, A. D., K. J. Davis, E. M. Stangeland, J. P. Pelham & N. V. Grishin. 2013. Illustrated lists of American butterflies. [23-I-2013]

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The Marketplace

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Research Requests

I am interested in evaluating the roles of various natural enemies in the decline of silkmoths in the Northeast. Towards this end it would be helpful to study cocoons that bear evidence of parasitism by flies or wasps or predation by birds or mammals. I would appreciate receiving cocoons of either promethea or cecropia that display incidences of attack by natural enemies. I also would appreciate hearing personal accounts or receiving images of parasitism or predation on either of these two silkmoths. If you are able to assist in anyway, or have an interest in the results of my studies, please contact me at Ben Olsen, Department of Ecology & Evolutionary Biology, University of Connecticut, Storrs, CT 06269, **benjamin.a.olsen24@gmail.com** 544

WANTED: I am making a video of Hyles lineata. Although I cannot afford a high speed video camera, I would like to include some footage of my favorite moth hovering. If you would be willing to share a few seconds of a White-lined Sphinx Moth hovering, I would very much appreciate it! Thanks! Richard Grossman, **richard@population-matters.org** 544

WANTED: Observations, photos, specimens needed of the spotted tussock moth, *Lophocampa maculata*, from all areas of North America. I am trying to define the present range of this species in the far north of Canada and the desert southwest in particular. I especially need data from Pacific coastal populations: San Francisco, CA to Southern Oregon and Vancouver, BC to Juneau, AK and the Southeast: GA to PA. Contact Ken Strothkamp, Lewis & Clark College, (**kgs@lclark.edu**) for more information. 551

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Colombia 2012 -- fantastic!

Kim Garwood

721 N Bentsen Palm Dr #40, Mission, TX 78572 **kimgrwd@sbcglobal.net**

I was in Colombia from mid August to the end of October, 2012 and saw many fabulous butterflies. I organized 3 groups of photographer/friends, each trip about 3 weeks long. This was my fourth trip to Colombia, which has become my favorite neotropical country for butterflies.

In Colombia the Andes split into three cordilleras, with two valleys in between, so there is tremendous biodiversity due to the elevational changes. The Madgalena Valley is between the central and eastern ranges, and is the much wider valley. The Cauca Valley is between the western and central chains, and is narrow. Medellin is the major city in the northern central range, while Bogota is in the eastern range. It is a fairly large country with many great places to watch butterflies. The level of education appears to be higher than other Andean countries, and I have met a number of Colombians who are very keen on nature study.

The weather patterns are very complicated in Colombia, and of course the weather appears to be changing, so it is very unpredictable. Colombia has 2 rainy seasons, around the 2 equinoxes. So March/April/May is the heavier rains, then again in late September/October/November, with supposedly drier times in January/February and again in June/July/August. But this has changed a lot in the last several years. As usual in the tropics you can get heavy rain at any time, but the normal pattern in the rainier times is bright sunny mornings and heavy build up of clouds by lunch time, then rain in the afternoon. That works fine for me, as I like to work on my photos in the afternoon. I always carry my laptop, and recommend my friends bring theirs as well, so we can look at each others' photos and work on id's during the trip.

One of the key things in butterfly photography is getting the butterflies to stop flying around so you can photograph them. This means baiting them in with various disgusting substances. We have found that spitwads, white toilet paper or napkins with either spit or salt water, work well. Pee and poop, especially human male pee, also can work wonders. The guys on my trips often bring a large mouth bottle so they can pee in it at night, then they have an extra bottle to bring in the field and put wherever they like. I try to get the drivers and local guides into the spirit as well. When told they need to drink more beer so they can produce more pee, there is rarely any argument. Putting a small white blob of paper on the pee spot visually attracts the butterflies to stop and investigate it. Old pee spots work well, but we usually don't have time to establish older pee spots. So bus stops, shrines, bridges, places where many people have stopped and peed, can be excellent. Fish or shrimp bait also works very well, if you can make it up. One of my Colombian friends likes to strain the blended shrimp and carry it in mist spray bottles. He can spritz it on leaves and it makes for great photos, no ugly white blob in the middle of the shot. It helps to bring a small bottle for salt water so you can refresh the spitwads. I've found a nasal spray plastic bottle, about 3 oz, works well. I can carry it in my pocket and fill it up each morning.

I have used Pablo Florez, of **http://www.multicolorbirdingcolombia.com/** as my logistical support on all my trips. Pablo is a hardcore bird guide, but he is very patient and has learned what I want in a butterfly trip. My theory is a bird guide knows where the good habitat is, and good places to stay, and if it's good for birds it is usually good for butterflies. And he can provide drivers, boatmen, whatever you need to get from place to place.

This time our trip started with us flying into Medellin, after arriving on our international flights from Houston to Bogota. Using United Airlines we were able to book our flights to Bogota and the short connecting flight to Medellin, then fly back from Bogota at the end of the trip. American Airlines flies direct to Medellin and Bogota, but you have to fly through Miami. Colombia has a very well developed system of internal airports with frequent flights, so that can be a convenient way to get around the country. The internal flights cost about $75-$120 one way, which at times can beat driving long distances.

Pablo met us at the airport about 45 minutes east of Medellin and we drove directly east to Rio Claro, a very nice habitat about 400m in the Magdalena Valley. This time we stayed at a new hotel, Los Colores, which is very close to Rio Claro. Some of the advantages of Los Colores are better food, air conditioning and internet, but I decided next time I would go back and stay at Rio Claro. I would rather be right in good habitat, just outside my door, and skip the internet for several days.

Rio Claro is along a narrow canyon with a beautiful clear river flowing down the middle of it, with a number of trails to explore. Just working the mile or so at the entrance is very productive. Plus the swimming is excellent! This is a good place to avoid on the weekends, as it is very popular with folks from Medellin as a weekend getaway. During the week it tends to be much less crowded.

This is usually one of the lower elevation places we work, so we see many of the more widespread gaudy lowland species here like *Morphos, Caria, Rhetus, Hamadryas*,

many *Charaxinae* and other *Nymphalidae*. A few of the species we saw at Rio Claro are the following: *Eurybia lycisca* (31 viii 10), many *Pierella* and *Cithaerias*, plus lots of tigerwing *Ithomiinae* at the trail of the Condor Cave, and this is the only place I have seen *Haetera macleannania*. One morning we explored a quarry up behind Los Colores and found a very fresh and cooperative *Arcas imperialis*, a beautiful female with a big pink patch.

Riodinidae: *Eurybia lycisca*

Nymphalidae (Satyrinae): *Haetera macleannania*

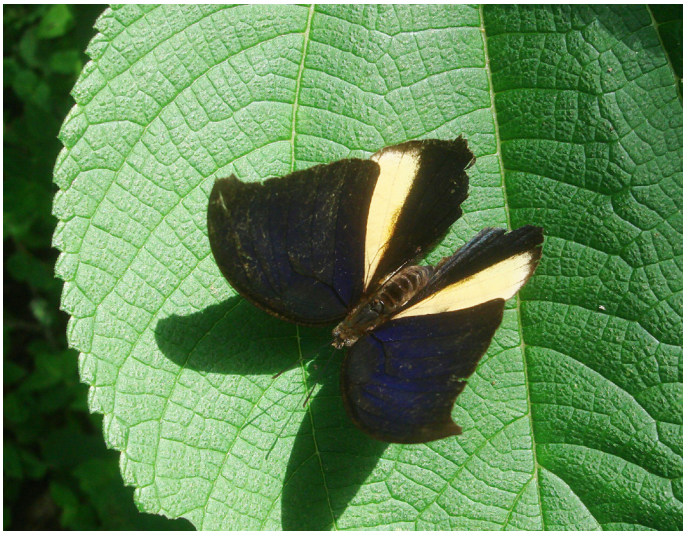
We then headed back to Medellin, about 3 hours, and onto Jerico, a small coffee town at 2,000m up on the western side of the Cauca Valley. We spent two nights at a simple but very friendly small hotel in this beautiful town, lots of carved wooden doors and cobblestone streets, and drove out to the Finca Cascada about 5 or 6km from town, around 1400-1500m. This is a private farm that grows cardamom, a spice in the ginger family. There are lots of shade trees growing over the cardamom plantations, which are interesting to see, and there are lots of butterflies. When we arrived it was raining, so we had an early lunch (we brought cheese, bread and yogurt from the grocery store)

Lycaenidae: *Arcas imperialis*

then it brightened up and we took off. One of my favorites here was a stunning *Symmachia titiana*, and my first look at *Consul panariste*. We spent a half day and the next full day at this spot, and could have spent more. We walked the dirt path up hill past an old house with lots of little pink weedy flowers around it that are covered with small butterflies, and every stream crossing had more goodies. We were high enough to get some cloud forest species, like *Dismorphia* and *Catasticta*, and low enough to get lots of the *Nymphalids*.

The next day we drove to Otun-Quimbaya, one of my favorite spots for butterflies in Colombia. This is above the city of Pereira, which has a regular airport. The lodge is about 15 km from town, but the road is pretty bad and takes a while to drive. Once you're at the hotel you can wander around to your heart's content. The road continues gradually up hill, making for very nice walking. It is wide

Riodinidae: *Symmachia titiana*



Nymphalidae: *Consul panariste*, upperside, underside

enough barely for the chiva, the local clunker carved wooden bus that makes the trip up and back once a day. This road is great to put out spitwads and find poop spots. There were lots of *Fountainea, Adelpha* and four species of *Epiphile* here, plus some great skippers. I have seen more *Fountainea nessus* here than anywhere. Some of my favorites from here are *Sacrator sacrator* and the endemic *Eresia levina*, plus many *Hypanartia* and *Callicore*, as well as a number of *Dalla*. One of the more spectacular *Ithomiinae* can be common here, *Elzunia humboldt*, and also *Pseudohaetera hypaesia***.** One morning we got a truck from town to drive us up to the end of the road, about an hour or so, where trails take off back up to the paramo. Lots of horse and mule trains take off from here for the back country, so there was lots of horse poop, which means butterflies. It's only maybe 100-200m higher than the lodge, which is about 1800m, but some different species were there, like *Podotricha juditha*.

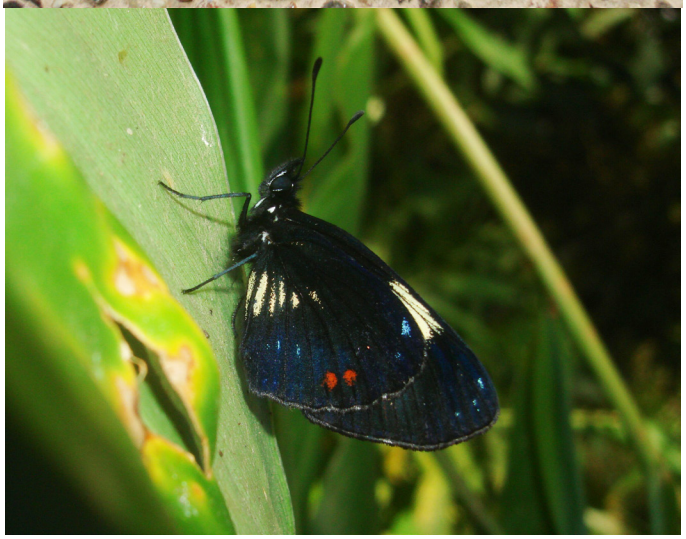
Nymphalidae: *Fountainea nessus*

The road near Otun-Quimbaya

Nymphalidae: *Epiphile neildi*

Hesperiidae: *Sacrator sacrator*

Nymphalidae (Ithomiinae): *Elzunia humboldt*



Nymphalidae: *Eresia levina,* upperside, underside

Nymphalidae (Satyrinae): *Pseudohaetera hypaesia*

Nymphalidae (Heliconiinae): *Podotricha juditha*

From Otun we drove west 3 hours to Montezuma, another favorite spot. This is on the west slope of the western cordillera in the Choco, and it can be very wet. But in early September the rains haven't really gotten too strong yet, and this time we had lots of sun. On a previous trip a bit later in the year we had serious rain several times, and the dirt road turned in to more of a river, running at least 6" deep.

Here we stayed with a local farm family, so the rooms were simple but fine. We had hot water showers and toilets, and Leo is an excellent cook, making lots of delicious veggies and salads, many grown right on her land. We slept at about 1400m, at the edge of the Parque Nacional Tatama, and could walk the dirt road all the way up to 2600m. Two days we had a jeep drive us up to the top and we walked down. They even brought us a hot lunch on horseback and found us wherever we were on the road.

A few of the great species we found here are *Teratophthalma monochroma*, a new riodinid for me, and lots of ***A**delpha rothschildi, Necyria bellona zaneta* and *Siseme* at the bridge maybe a km or so above the house. We also finally got good shots of *Eunica norica*, a cloud forest species I've chased several places before but never been able to get close to.

Riodinidae: *Teratophthalma monochroma*
upperside, underside

Nymphalidae: *Adelpha rothschildi*

Riodinidae: *Necyria bellona zaneta*
upperside, underside

Nymphalidae: *Eunica norica,* with *Adelpha alala*

We then headed south towards Cali, an area I've never been before, and spent a few nights at El 18, 18 km above Cali, then down the famous, in the birding world at least, road to Buenaventura. This used to be better, but I think it has had more and more people move in and squat in their little wooden shacks along the road. So the habitat seems more degraded then I've heard about. Pablo had made arrangements for us to get access into, and even spend the night, at the highly secure hydroelectric plant and dam. First we spent a night at Queremal, a wide spot in the road but there is a simple hotel and restaurant. We took a truck and headed up into the hills above, where we walked a stream and found lots of *Dismorphia*, including *D. mirandola*, and *Heliconius erato chestertonii*, an endemic subspecies.

The next morning we left early and headed west on the Buenaventura road, getting to the hydroelectric gate after about 3 hours. It took a while to get through the security; they had all our names and passport numbers, but finally we made it and drove up to the compound of building where we would spend the next two days. This is about 700 meters, again on the west slope, and we worked a great road that leads to the dam. We never made it all the way, twisting up a narrow beautiful valley, with lots of water running down the sides. Probably the best butterfly we found here was *Morpho theseus juturna*, a huge butterfly feeding on a dead frog in the road. Overall I don't think it was worth it to drive down to Cali, and probably wouldn't do it again. It was a lot of driving and not huge numbers of different species, but it was interesting to see it. If I came back I would spend 3 or 4 nights at the hydroelectric plant, to have plenty of time to work the road. This ends the first section of my Colombia trip, with two more groups to go. I flew back to Medellin from Cali, and my friends flew to Bogota and on to the US.

Pieridae: *Dismorphia mirandola*

Nymphalidae (Heliconiinae): *Heliconius erato chestertonii*

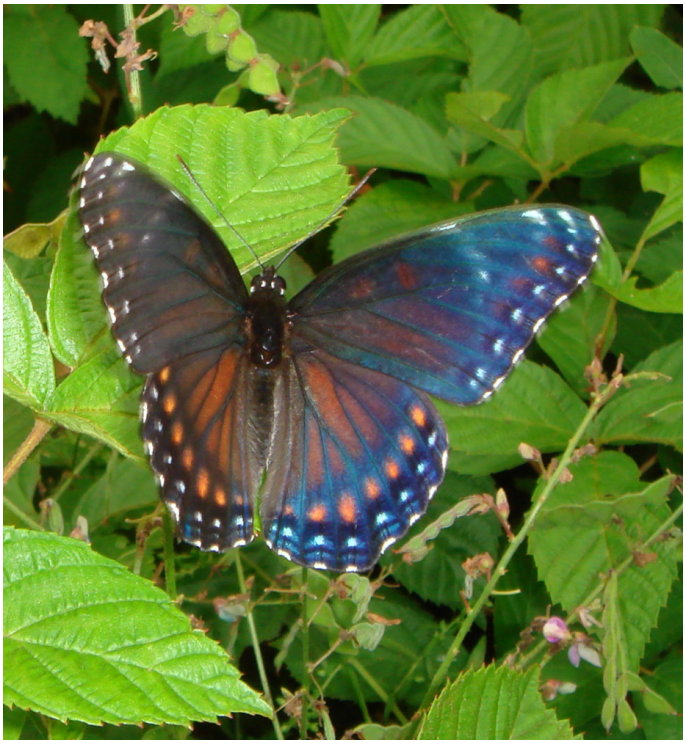
Nymphalidae (Morphinae): *Morpho theseus juturna*

Manna from the field: wild *Limenitis archippus* ab. "*rubidus*" (Strecker 1878)

Monica Miller

5680 Clark Ave., Bethel Park, Pennsylvania 15102 **MMoniker@aol.com**

The year 2010 was a year of peak numbers for *Limenitis* species in southwestern Pennsylvania. In Washington County PA, on August 21, 2010, I not only chanced upon a once-in-a-lifetime find -- a wild hybrid of a Viceroy and Red-spotted Purple (*Limenitis archippus ab. "rubidus"* (Strecker 1878)) -- but was blessed with opportunity to take good dorsal and ventral photographs (see accompanying pictures). For over two decades I had been keeping my eye on the local Red-spotted Purple population, hoping someday to spot a White Admiral in their midst. Never did I expect to encounter such a wondrous specimen as this hybrid.



It demonstrated all of the characteristic male perching and patrolling behavior of *archippus*. But the day was partly cloudy and two orange male Viceroys were also patrolling that same stretch. When the sun was out, so were the Viceroys and they drove the *rubidus* into hiding while they battled for territory. However, when clouds passed over the sun, the Viceroys disappeared and the hybrid was quick to seize his opportunity to patrol, until the sun and competing Viceroys once again came out and drove it back into hiding.

With God's sense of humor, an hour later that decades-long-awaited White Admiral showed up for fifteen seconds to puddle. I blinked at it in surprise, then shrugged and laughed. What was a White Admiral sighting after that of a *rubidus* hybrid?

Metamorphosis

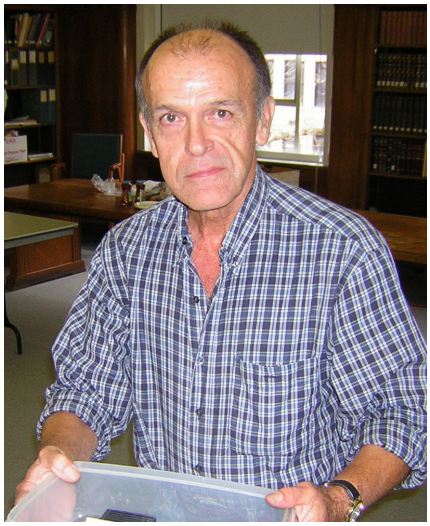
Julian Donahue

Jenkins, Dale Wilson, of Sarasota, Florida, on November 10, 2012, at the age of 94. He received his B.S. (1938), M.A. (1939), and Ph.D. (1947) in entomology from Ohio State University. His employment and research initially focused on medical/veterinary aspects of entomology, and he served as the Chief, Entomology Division, Ft. Detrick, Frederick, MD 1957-1962. He served in a number of other appointments: chief of environmental biology, NASA, Washington, 1962-66; assistant director of bioscience programs (1966-69) and director of ecology program (1970-74), Smithsonian Insitution; and director of the Pan America Center for Human Ecology Program in Mexico, D.F. (1975-78). In addition, Dale was a consultant/lecturer with Johns Hopkins University, UNESCO, USAF, WHO, and the National Academy of Sciences. He and his wife, Joanne, both avid Lepidoptera collectors, retired to Sarasota in 1978. There Dale began to study the Nymphalinae in the collections of the Allyn Museum (now deposited at the McGuire Center for Lepidoptera, Florida Museum of Natural History, Gainesville). He focused on the Eurytelina and produced several large systematic monographs on the neotropical fauna which were published in the *Bulletin of the Allyn Museum* series, including works on *Hamadryas* (1983), *Myscelia* (1984), *Catonephele, Ectima* (1985), *Epiphele* (1986), *Asterope* (1987), *Nessaea* (1989), and *Eunica* (1990). Dale had been a member of The Lepidopterists Society from 1976 to 1999, while Joanne was a member in 1984-1985. Dale and Joanne donated the bulk of their collection to the Florida Museum of Natural History, 1992-1994, with the remaining specimens donated in 2010. In addition to his work on Lepidoptera, Dale pursued other interests including gardening, bromeliads, travel, fishing, and genealogy. Dale is survived by his former wife, Elizabeth Jenkins, daughters Nancy O'Brien and Rebecca (Len Bauling), sons, Paul (Kathy), and Ken (Pauline), and seven grandchildren and four great grandchildren. Joanne, an artist, designer, and bromeliad grower among other interests, predeceased Dale on November 23, 2009. *[submitted by Jacqueline Y. Miller, McGuire Center for Lepidoptera and Biodiversity]*

Jordison, John C., of Lincoln, Nebraska, on 18 October 2012, at the age of 61. Mr. Jordison was born in Fort Dodge, Iowa, on 25 April 1951, and had been a member of the Society from 1979 through 1995. He is survived by his wife LouAnn; daughter CaraMae Jordison of Denver, Colorado; son Tom Jordison of Lincoln, Nebraska, three step-sons, four grandchildren, his brother Kevin, and his mother Mariella Jordison.

Sekerman, Charles Arthur, of North Hollywood, California, at the age of 79 on 16 January 2012. Chuck, as he was known in the Lepidoptera community, was born in Nebraska on 12 April, 1932, the son of Nathan and Sarah Sekerman. His father had immigrated from Austria in 1909 at the age of 2. In 1954 Chuck graduated from the University of California, Los Angeles, where he had majored in music and was a member of the Phi Beta Kappa scholastic honorary society and Phi Mu Alpha, a music honorary society. He was a music teacher at South Gate Middle School (Los Angeles Unified School District) for 30 years, and retired in 1995. Chuck was an enthusiastic butterfly collector who traveled widely in the western United States in pursuit of new species to add to his collection. He was an active member of the Lorquin Entomological Society (Los Angeles), and first joined The Lepidopterists' Society in 1965. For assistance in identifying the more challenging specimens, especially skippers, he frequently visited the collections at the Natural History Museum of Los Angeles County, and made regular donations of rare butterflies and diurnal moths. Numerous specimen records from Chuck's field work may be found on the Butterflies and Moths of North America website (http://www.butterfliesandmoths.org/). *[Shelly Kahler, Russell David Goins, and Julian P. Donahue]*

Wolfe, Jacque A., of Salt Lake City, Utah, on 18 October 2012 at the age of 74. Jacque was born in Montana on 15 September 1938, and first became interested in butterflies in June, 1949. After moving to Utah he joined the Utah Lepidopterists' Society in 1991, and The Lepidopterists' Society in 1992. He did most of his collecting through rearing, and became quite expert in rearing *Euphydryas, Thessalia,* and the *Chlosyne palla* complex. He has donated his collection to the Utah Museum of Natural History. *[Todd Stout and Utah Lepidopterists' Society website]*



Announcements:

62nd Annual Meeting of the Lepidopterists' Society, June 27-30, 2013

The 2013 Lepidopterists' Society Annual Meeting will take place July 23-29. The meeting will be held at the Hilton University of Florida Conference Center, Gainesville, not far from the McGuire Center for Lepidoptera and Biodiversity at the Florida Museum of Natural History on the University of Florida campus. The meeting is a joint meeting with the Association for Tropical Lepidoptera (ATL) and the Southern Lepidopterists' Society (SLS).

Registration for the meeting is now open. Early registration is $115 for non-students and $85 for students. Registration information and forms are currently available on the Lepidopterists' Society website at www.lepsoc.org, and should be available at www.lepsoc2013 as well. Accomodations are available at the Hilton for $129/night for a double, but there are several nearby motels that are quite a bit cheaper. For the schedule of events, description of field trips, some accomodation alternatives, hard copy registration form and call for papers, see the Winter 2012 News of the Lepidopterists' Society (54:4, pgs. 130-135).

Society of Kentucky Lepidopterists

The Society of Kentucky Lepidopterists is open to anyone with an interest in the Lepidoptera of the Great State of Kentucky. We are a very active organization. We have two or three field meetings every year. The schedule for the 2013 field meetings.

Spring Meeting: Beaver Creek Wilderness Area, Daniel Boone NF: April 12, 13 & 14

Summer Meeting: Henderson Sloughs WMA, Henderson County, August 23, 24, & 25

The Annual Meeting will be held in November 15 & 16 at the Insect Museum of University of Kentucky, Lexington, KY. Our featured speaker will be Dr. Michael Pogue who will speak on the Heliothinae moths of North America.

Annual dues are $15.00
To join the Society of Kentucky Lepidopterists, send dues to: Les Ferge, 7119 Hubbard Ave., Middleton, WI 53562.

New address for back issue sales and lost issue claims

Julian P. Donahue has been appointed as an Assistant Treasurer, and has assumed responsibility for replacing missing issues of publications and sale of back issues. He is taking over from Ron Leuschner, who has performed these and many other volunteer Society duties for many years. Our thanks to Ron for his devoted service.

All available back issues have been inventoried. Single issues of the *Journal* are $4 each, single issues of the *News* are $3 each, plus shipping, while supplies last. Before ordering, inquire about availability and obtain a shipping estimate. Single copies of the **Season Summary** published in 2000, 2002, and 2004-2012 are available for $10 plus shipping (each Season Summary is for the calendar year **prior** to the year of publication). A few copies of the **Membership Directory** are available for the years 2000, 2004, 2008, 2010, and 2012; price is also $10 per copy plus shipping. Julian P. Donahue, Assistant Treasurer, 735 Rome Drive, Los Angeles, CA 90065-4040, USA; e-mail: **julian@lepsoc.net**; Phone: (323) 227-1285; FAX: (323) 227-0595

Is your e-mail address missing from the 2012 Membership Directory?

As part of the process of "cleaning up" the membership database for the recent Membership Directory, I sent test e-mails to all addresses we have on file. All addresses that failed were permanently deleted from our records.

Besides rejections because of a closed account, mail may have failed to reach valid addresses because the mailbox was full, or the message was refused if it was incorrectly considered to be "spam" (the messages were sent in bulk).

Communicating by e-mail is fast and efficient. To receive e-mail messages in the future add "The Lepidopterists' Society" **<julian@lepsoc.net>** to your address book or approved sender list. (We never rent, loan, sell, or share your e-mail address except with Society officers for Society business, although addresses published in the Membership Directory are available to other members and library patrons.)

To add or update your e-mail address in the Society records, please send an e-mail, from the account you want us to use, to me at: **julian@donahue.net**

www.lepsoc.org

More Announcements:

Student awards at Lep Soc 2013 and a call for Nominations for the William D. Winter Jr. Service Award

As in previous years, the 2013 Annual Meeting of The Lepidopterists' Society will feature award competitions for the best student paper and poster presentations. The Executive Council increased the amounts of these awards at the 2012 meeting.

The Harry K. Clench Award for the best student presentation now provides $500 for first place and $250 for second place winners. The Alexander B. Klots Award for the best student poster now provides $350 for first place and $175 for second place winners. All student researchers are encouraged to present at the meetings. Presenters are eligible for these awards up until 6 months after completing their degree.

Meeting attendees are also reminded to bring door prizes for the drawing at the banquet on Saturday, June 29th. If you would like to ship door prizes ahead of the meeting, please contact Dr. Charles Covell, Jr. (**ccovell@flmnh.ufl.edu**).

The Winter Award Committee is now accepting nominations for the William D. Winter Jr. Service Award. This biannual award recognizes individuals who have provided outstanding service to the Society. Nominations should be sent to Andrew Warren (**andy@butterfliesofamerica.com**) before April 15th.

The Bryant Mather Award

During the Executive Council meeting at the 2012 Lepidopterists' Society meeting in Denver, Colorado, the idea of providing financial aid to individuals wishing to travel to, and present at, the 2013 meeting was discussed and the following motion was adopted: "The Society will provide up to $1000.00 to be divided among winning member applicants for money to travel and present (poster or talk) at the 2013 meeting in Gainesville, Fl. This award shall be known as the Bryant Mather Award, and applications will be evaluated by the Awards Committee in time to notify winners as they make arrangements to travel to the Gainesville meeting." The award is named in honor of the late Bryant Mather, a long-time Society Member and financial benefactor.

The Awards Committee, Chaired by Charles Covell, is now accepting applications from Society Members for the 2013 Bryant Mather Award for travel to the Lepidopterists' Society meeting in Gainesville, Florida, June 27-30. We anticipate awarding between three and five stipends to partially cover meeting-related expenses. Applicants are to be judged on need for the award (i.e., lack of sufficient resources to travel to the meeting without the award) and acceptance of their proposed presentations.

Please submit a brief (500 words maximum) application summarizing your need for the award, together with a detailed budget and proposed title of your presentation or poster to Charles Covell (ccovell@flmnh.ufl.edu) by April 15th, 2013. Winners will be notified by April 30th, 2013. Recipients will be reimbursed by the Treasurer after the meeting.

PayPal: The Easy Way to Send Money to the Society

In these days of instantaneous Internet commerce, members may find it tedious to actually write and mail a real paper check to purchase Society publications, t-shirts, and back issues, or to pay late fees, or to donate money or make any other kind of payment to the Society. While membership dues can be paid online through PayPal, we have just discovered that anyone may make payments using PayPal without going through the Society website.

For those not familiar with PayPal, it is a convenient way to send money to anyone who has a PayPal account—even if the sender doesn't have an account, but does have a credit card. And it is available in many countries outside the U.S. The process is simple: sign on to www.PayPal.com, and navigate to "Send Money." To send money to The Lepidopterists' Society, use this recipient e-mail address: kerichers@wuesd.org; follow the instructions to complete the transaction, and be sure to enter information in the box provided to explain why the money is being sent to the Society. It's as simple as that—and be sure to let us know if you have any difficulties with the process.

National Moth Week 2013 - Global Citizen Science Focused On Moths

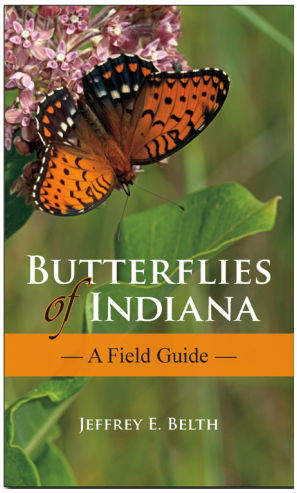
NATIONAL Moth Week
Global Citizen Science

The next National Moth Week will be held July 20-28, 2013. Registration materials and information is available on the website at **www.nationalmothweek.org**. The event is open to anyone interested in moths anywhere around the world. See the associated article on page 18 about the results from National Moth Week 2012.

Continued on p. 45

Book Review

Butterflies of Indiana: a Field Guide. By Jeffrey E. Belth. 344 pp. Paperbound; approx. 7.5 x 4.5 in; 854 color illustrations. Indiana University Press. 2013 [2012]. ISBN: 978-0-253-00955-5; $20; E-book $17.99. Sample pages can be viewed at Amazon.com and Google Books.



Although I was born in Ohio, I spent nearly a decade of my childhood in northeastern Indiana, mostly Columbia City, Whitley County. It was there during the summer of 1974 that I saw my first Giant Swallowtail (*Papilio cresphontes*), a thrilling experience that I will never forget. Two years later, I chanced upon a single Zebra Swallowtail (*Eurytides marcellus*), which became a crown jewel in my fledgling collection. From that moment I was forever hooked on Lepidoptera. With the exception of a brief hiatus during my mid-teens, I have never looked back. Although I moved from Indiana in 1977 and went on to co-author books about the butterflies of Ohio and Florida, I credit the fields and forests around Columbia City with sparking my passion in natural history, especially butterflies.

Many years ago I sent my meager list of Indiana records to the late Ernie Shull, who in 1987 published *The Butterflies of Indiana*, a reference book that greatly expanded upon Willis S. Blatchley's century-old *A Catalogue of the Butterflies Known to Occur in Indiana*. I still cherish my personally inscribed copy of Shull's book. I therefore was excited when I was asked by Indiana University Press in 2006 to comment on Jeff Belth's proposal for a new book about Indiana butterflies. I enthusiastically supported the project and eagerly awaited its publication. My anticipation was justified, as this is unquestionably the finest local butterfly field guide ever produced. It is all the more remarkable given that the author is solely responsible for nearly every aspect of its creation, from graphic production to layout and design. He literally constructed the book on his home computer. The author should be congratulated on this masterful achievement and the publisher recognized for permitting such unusual creative freedom.

Although Indiana is the smallest contiguous state west of the Appalachian Mountains, it boasts a list of 149 species of butterflies, which is slightly greater than the adjacent states of Kentucky and Ohio. The author presents an accurate and updated overview of Indiana's butterflies, while offering an effective means to more easily identify them. This book is small enough to be carried into the field (a true *field* guide!) and will appeal to watchers, photographers, and collectors alike.

The book begins with a series of Quick Keys, which help readers quickly narrow identifications to within a few pages of the correct species. Color plates illustrate each species with high resolution "clipped" images of living adults (Fig. 1), a technique similar to that introduced a decade ago by Jim Brock and Kenn Kaufman in their popular *Field Guide to Butterflies of North America*. Information about each species is printed opposite the plates. An exceptional feature is the use of numbered field marks that correspond to numbered arrows on the plates. Charts indicate the relative abundance of each species during the year and maps display their current and expected distributions. Particularly valuable are 13 pages of unique side-by-side dorsal comparisons of grass skippers, a boon to anyone who struggles with the identification of these confusing species. Two plates of common moths are followed by 38 pages of representative butterfly early stages, hostplants, and nectar sources.

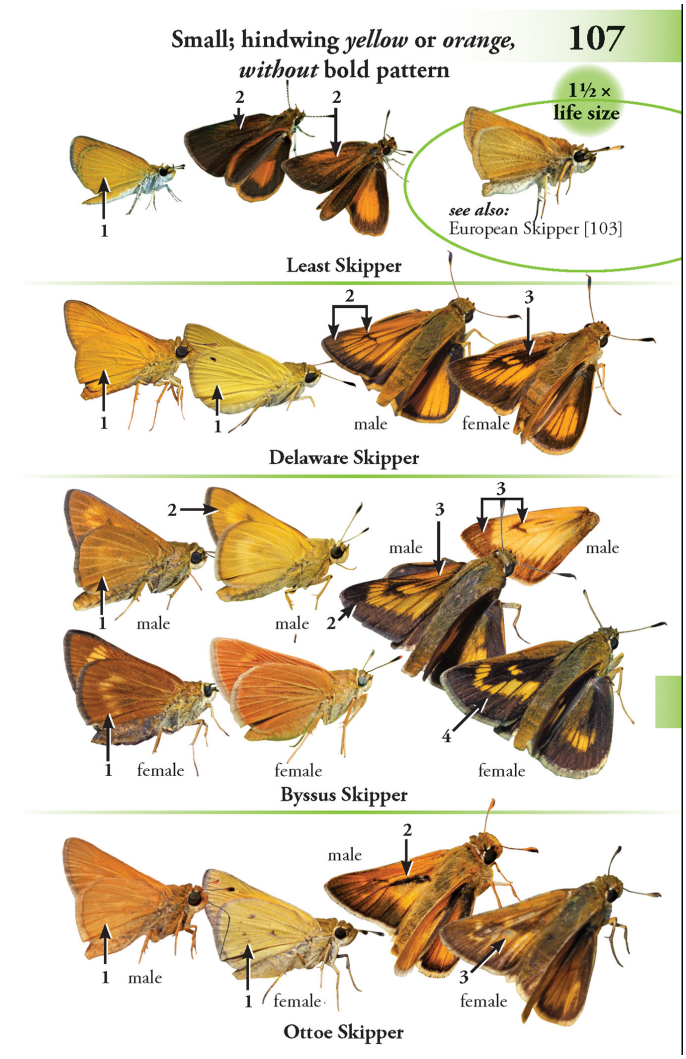


Figure 1. A plate of skippers from *Butterflies of Indiana: a Field Guide* (courtesy of J. E. Belth).

Unlike most guides, the introductory material appears at the rear of the book, allowing more rapid access to the color plates. This text comprises nearly half the book and the author adeptly manages to pack a lot of information into such a small volume. The author's writing style is pleasant and informative, appealing to both the novice and expert. Included are sections about the importance of butterflies and how to separate them from moths. The geology and natural communities of Indiana are discussed, as well as methods to watch, photograph, and responsibly collect (the Lepidopterists' Society Statement on Collecting is reproduced in its entirety). The two-page section "Collecting Butterflies" more succinctly explains the scientific need to collect specimens than an entire dissertation on the subject. Other sections cover the butterfly life cycle, behavior, conservation, and the history of butterfly study in Indiana. Also included are a checklist of species, review of dubious records, data for the book's images, and a glossary of terms. A 16-page bibliography proves once again that this is no ordinary field guide. The acknowledgements reveal that several authorities were consulted to ensure accuracy.

There is very little to criticize about this book. Some species, especially skippers, received abbreviated write-ups relative to others. Because the Checkered White (*Pontia protodice*), Cloudless Sulphur (*Phoebis sennae*), Southern Dogface (*Zerene cesonia*), and Checkered Skipper (*Pyrgus communis*) are often recorded at the same localities year after year, it is suggested that they maintain permanent populations in Indiana. These southern species are not known to permanently reside in adjacent states, thus their recurrence is likely a result of annual re-colonization where suitable hostplants grow in proximity to adult immigration corridors (e.g. river valleys). The abundance of most species is denoted only on the charts, but determining the thickness of a line is sometimes more difficult than simply reading how common they are. To get the most out of the book, I urge readers to consult the "Using the Plates" section on pages 183-189. Finally, the publisher's website states that the official publication date of the book is 28 November 2012 (I received my copy in mid-December), but 2013 is printed on the copyright page. These are merely nitpicky observations that do not detract from the usefulness of the book.

In summary, I would suggest this field guide to everyone who has an interest in North American butterflies. Although it treats only the fauna of Indiana, its significance extends well beyond the boundaries of that state. If I were to write my dream field guide, it would surely resemble *Butterflies of Indiana.*

John V. Calhoun, 977 Wicks Drive, Palm Harbor, FL 34684. Research Associate, McGuire Center for Lepidoptera and Biodiversity, Florida Museum of Natural History, University of Florida, Gainesville, FL. Email: **bretcal1@verizon.net**.

More Announcements:

Continued from p. 43

Correction

For the Iowa fen article in the Winter 2012 issue (54:4, pgs. 121-123), *Cenopis mesospila* is the currently valid name for *Sparganothis albicaudana.* Thanks to Bob Patterson for catching this nomenclatural update.

Another Correction

The lovely young lady pictured here modeling a Lepidopterists' Society T-shirt is Megan McCarty. Her picture appeared with the new T-shirt advertisement on page 3 of the recently distributed 2012 Membership Directory, but unfortunately she was misidentified in that publication as Heather Cummins. Julian Donahue, managing editor of the Membership Directory, apologizes profusely to Megan and Heather for this error.

www.lepsoc.org

Membership

The Lepidopterists' Society is open to membership from anyone interested in any aspect of lepidopterology. The only criterion for membership is that you appreciate butterflies and/or moths! To become a member, please send full dues for the current year, together with your current mailing address and a note about your particular areas of interest in Lepidoptera, to:

Kelly Richers, Treasurer
The Lepidopterists' Society
9417 Carvalho Court
Bakersfield, CA 93311

Dues Rate

Active (regular)	$ 45.00
Affiliate (same address)	10.00
Student	20.00
Sustaining	60.00

(outside U.S., for above add 5$ for Mexico/Canada, and 10$ elsewhere)

Life	1800.00
Institutional Subscription	60.00
Air Mail Postage, **News** ($30.00 outside North America)	15.00

Students must send proof of enrollment. Please add $5.00 to your dues if you live in Canada/Mexico, $10.00 for any other country outside the U.S. to cover additional mailing costs. Remittances must be in U.S. dollars, payable to "The Lepidopterists' Society". All members receive the **Journal** and the **News** (each published quarterly). Supplements included in the News are the Membership Directory, published in even-numbered years, and the Season Summary, published annually. Additional information on membership and other aspects of the Society can be obtained from the Secretary (see address inside back cover).

Change of Address?

Please send permanent changes of address, telephone numbers, areas of interest, or e-mail addresses to:

Julian P. Donahue, Assistant Secretary, The Lepidopterists' Society 735 Rome Drive, Los Angeles, CA 90065-4040. Phone (323) 227-1285, FAX (323) 227-0595, ***Julian@lepsoc.net***

Our Mailing List?

Contact Julian Donahue for information on mailing list rental.

Missed or Defective Issue?

Requests for missed or defective issues should be directed to: Julian Donahue, Asst. Treasurer, 735 Rome Drive, Los Angeles, CA 90065-4040, (323) 227-1285, **julian@lepsoc.net**). Please be certain that you've really missed an issue by waiting for a subsequent issue to arrive.

Memoirs

Requests for Memoirs of the Society should be sent to Publications Manager, Ken Bliss (address opposite).

Submissions of potential new Memoirs should be sent to:

Lawrence E. Gall
Computer Systems Office
Peabody Museum of Natural History
P. O. Box 208118, Yale University
New Haven, CT 06520-8118
lawrence.gall@yale.edu

Journal of The Lepidopterists' Society

Send inquiries to:
Keith Summerville
(see address opposite)
ksummerville@drake.edu

Book Reviews

Send book reviews or new book releases for the **Journal** to:

Phillip J. DeVries
Dept. Biological Sciences, University of New Orleans, New Orleans, LA 70148, ***pdevries@uno.edu***

Send book reviews or new book releases for the **News** to the News Editor, James K. Adams (see address opposite).

WebMaster

John A. Snyder
Dept. of Biology, Furman University
Greenville, SC 29613-0001
(864)294-3248
john.snyder@furman.edu

Submission Guidelines for the News

Submissions are always welcome! Preference is given to articles written for a non-technical but knowledgable audience, illustrated and succinct (under 1,000 words, but will take larger). Please submit in one of the following formats (in order of preference):

1. Electronically transmitted file and graphics—in some acceptable format—via e-mail.

2. Article (and graphics) on diskette, CD or thumb drive in any of the popular formats/platforms. Indicate what format(s) your disk/article/graphics are in, and call or email if in doubt. Include printed hardcopies of both articles and graphics. The new InDesign software can handle most common wordprocessing software and numerous photo/graphics software. Media will be returned on request.

3. Color and B+W graphics should be good quality photos suitable for scanning or—preferably—electronic files in TIFF or JPEG format at least 1200 x 1500 pixels for interior use, 1800 x 2100 for covers.

4. Typed copy, double-spaced suitable for scanning and optical character recognition. Original artwork/maps should be line drawings in pen and ink or good, clean photocopies. Color originals are preferred.

Submission Deadlines

Material for Volume 55 must reach the Editor by the following dates:

Issue	Date Due
55 2 Summer	May 20, 2013
3 Fall	Aug. 15, 2013
4 Winter	Nov. 15, 2013

Reports for Supplement S1, the Season Summary, must reach the respective Zone Coordinator (see most recent Season Summary for your Zone) by Dec. 31. See inside back cover (facing page) for Zone Coordinator information.

Executive Council

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Nymphalidae (Satyrinae): *Euptychia hewitsoni;* April 20, 1992, Rondonia Brazil (photo by George Krizek; see page 10)

Riodinidae: *Euselasia eutychus;* November 9, 1989, Rondonia Brazil (photo by George Krizek; see page 10)

An interesting interaction between *Thessalia theona* and *Chlosyne lacinia*

September 16, 2012 at Fort Hucachua in Garden Canyon, Sierra Vista, Arizona (photos by Robert Parks)

Figure 1. *Thessalia theona* sipping at remains of a bird dropping. Figure 2. *Chlosyne lacinia* arrives, sips at the same moisture while *T. theona* grasps the front walking leg of *C. lacinia*. Figure 3. *T. theona* apparently showing an interest in mating with *C. lacinia*. Figure 4. *T. theona* continues to "chase" *C. lacinia* as *C. lacinia* continues to probe for more moisture.