Gorgone Checkerspots (Chlosyne gorgone) are rare commodities in the southeastern United States. Although they are widespread throughout the mid-West, in this part of the country they are considered a fugitive species—as the name implies, here today, and mysteriously gone tomorrow. Habitat requirements seem to dictate the length of their stay but are poorly understood. In April and May 2011, thanks to Irving Finkelstein’s years of experience and his gracious generosity, Sara Bright and I were able to explore the habitat and lifestyle of Gorgone Checkerspots at Cooper’s Furnace Day Use Area near Clarksville, Georgia.

Cooper’s Furnace Day Use Area is located on the banks of the Etowah River, near Altoona Dam. Currently operated by the U.S. Army Corps of Engineers, it served as an antebellum industrial center and is on the National Registry of Historic Places. Its trails wind through a lovely mixed pine and hardwood forest complete with mountain overlooks, picturesque streams, and a beaver pond. Irving has a long history with this site. In the mid-1970s when he decided to explore natural areas within a 50-mile radius of his new home in Atlanta, one reconnaissance mission took him to the Cooper’s Furnace area where he was delighted to discover a colony of Gorgone Checkerspots. In the years that followed, he recalls that their population waxed and waned: one year he found eight gorgones during a 1½ -2 hour search; the next year yielded only
and the following year he found only 2 butterflies. For several years, the gorgones seemed to have vanished, but in 2010, when James Adams expressed an interest in finding the species, Irving suggested revisiting the Cooper Furnace site. And their search was successful—four male Gorgone Checkerspots were flying near the roadside stream.

On April 19, 2011, Sara and I were eager to meet Irving to see whether gorgones would once again fly at Cooper’s Furnace. We had never had a chance to observe a southern population. In our own state of Alabama, the last record is from the 1950’s and the exact location is unknown. Any worries that the trip would end in a bust were quickly dispelled when the first butterfly Irving spotted past the entrance was a male Gorgone Checkerspot. Several others also sat along the dirt road. Dozens of Pearl Crescents were nectaring on the Daisy Fleabane that grew along the stream bank, but a few gorgones were also in the mix, including at least one female. By the end of the day, we saw a total of 11 gorgones.

Gorgone Checkerspot habitat is typically described in terms of “old fields,” “grassy burns,” and “second-growth scrub.” The presence of a stream is often included, but the lush, damp area surrounding this particular stream did not seem to fit the descriptions at all. The power cut that rises steeply above the stream looked like a better match—sunny, dry, and sparsely vegetated. A climb to the first tower revealed a small group of Gorgone Checkerspots actively involved in territorial defense, mate hunting, and nectaring. The steep incline was covered with blackberry vines (ouch!), short pine and sweet gum saplings (with herbicide burns), and herbaceous plants that included phloxes, asters, bracken fern, and goldenrods. There were also sparse patches of a sandpapery-leaved sunflower (Helianthus sp.) that we suspected served as the gorgones’ host plant.

Two weeks later, our hunch was confirmed. We found a cluster of checkerspot eggs attached to the underside of a Helianthus leaf, and several plants exhibited the blackened, skeletonized leaves that are the telltale eating signs of checkerspot caterpillars. Within this shriveled foliage, we found scores of first and second instar larvae. Most were covered with dark bristles, but some were virtually smooth, looking more like tiny tan mealworms than checkerspot caterpillars.

We visited the site again on May 12 and expanded our search another quarter mile up the power cut, discovering checkerspot cats intermittently among the patches of sunflowers as far as we were able to walk—approximately 15 clusters. We noticed that caterpillars take advantage of the colonial nature of the sunflowers by moving from plant to plant, decimating only a few leaves on the bottom half of each stem. They crawl along the ground and rest in the leaf litter on their way to find another plant. Although this pattern quickly becomes apparent to human searchers, perhaps it puzzles predators, and it may function to keep larvae out of (what we can testify is) brutal, direct sunlight.

In a subsequent visit, we continued to locate and re-visit caterpillar-chewed Helianthus plants. Many no longer contained larvae. Certainly predation may have been a factor, but we also believe that the sheer number of caterpillars overwhelms the amount of available foliage. The leaves on this particular sunflower are thin and widely spaced, and its distribution is sporadic along the hillside.

By late May, some third-instar cats appeared to be in diapause within dried, lower leaves of their host plants. Leaf edges were delicately silked together, and these small structures often contained several larvae. Not all cats went into diapause. Later-instar caterpillars continued their eating regimens, although at this stage in their developments, they were less gregarious. We believe these non-diapausing individuals will compose a second flight. [Cont. on page 75.]
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WELCOME TO TWO NEW STUDENT
SL SOCIETY MEMBERS

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Although some butterflies such as the Eastern Black Swallowtail (*Papilio polyxenes asterius*) sometimes pupate on the larval host plant or nearby, finding the pupae of butterflies in the field is often a difficult task. On March 23, 2010, I happened to find a pupa of the Tiger Swallowtail (*Pterourus glaucus australis*) at the St. Johns River Water Management District in Palatka, Florida, where I work.

This pupa (Fig. 1) was attached to the trunk of a Sweet Bay (*Magnolia virginiana*) tree growing along a small stream. Poison Ivy (*Toxicodendron radicans*) and Virginia Creeper (*Parthenocissus quinquefolia*) vines were also attached to the trunk around the pupa. The tree was about 45 to 50 feet tall and seven inches in diameter at breast height. The first branch was about 15 feet above ground surface. The pupa was attached to the southern side of the trunk about five feet above ground surface. One week later on March 30th, 2010, I noticed that the adult had emerged. I assume that the larva had fed on leaves in the canopy of the tree.

Tiger Swallowtails, however, do not always lay their eggs on leaves of the host plant high above the ground in Florida. On May 12, 2010, I found a young larva of *Pterourus glaucus australis* in a swamp in Lake County, west of US highway 27 near the Polk County line. The sapling was less than three feet tall (Fig. 2).

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![Fig. 1. Sweet Bay (*Magnolia virginiana*) tree with a pupa of *Pterourus glaucus australis*: A) Arrow marks the location of the pupa about five feet above the ground, B) same, C) the pupa, D) the pupa shell after eclosion.](image-url)
Fig. 2. Young larva of *Pterourus glaucus australis* found on a Sweet Bay (*Magnolia virginiana*) sapling growing in a swamp in southern Lake County, Florida.
These past few years, as winter approached and I bemoaned the passing of longer days and warmer weather, my Dad regularly has told me that winter hurts more now than when he was younger. The last two winters, even down here in southwestern Louisiana, have brought home the reality of those words. Where once snow fall was few and very far between here, we have now had two consecutive years of multiple snow storms, multiple ice storms and multiple (and consecutive) nights of temperatures below freezing.

While I acknowledge what Louisianians experienced this past winter was mild when compared to further north (even Memphis where my Dad lives had near arctic conditions on repeated occasions), I must also admit I was very excited when I found out in December that my work would require that I travel to Puerto Rico for the last two days of January and the first day of February (the word “require” is probably an oxymoron in the context of this sentence, but that is my story and I’m sticking to it).

So, on January 30, 2011, I left winter behind for three days in a tropical paradise. The Conference I was to attend was held at the El Conquistador Golf Resort and Casino at Las Croabas, on the northeast end of the island. I have visited the Caribbean before with trips to Key West, Grand Cayman, Grand Bahama, Turks and Caicos and Bonaire, but Puerto Rico is very different. First, it is much larger than I imagined, 110 miles long and 35 miles wide. On the one hour plus drive from San Juan (a huge city, by the way) to the resort, I was amazed at how many trees there were. It also has some serious elevation, with portions of the El Yunque Rain Forest reaching 3624 feet.

The resort itself sits along a cliff with the Atlantic Ocean on one side and a lush golf course on the other, sloping downward and inland from the buildings. I ran each day in shorts and a cut-off running shirt, up and down the golf course, sweating bullets and loving every minute of the 80 degree heat.

I had hoped to have time enough to hike the El Yunque Rain Forest, but it was too far from the resort, and I was without transportation. I had noticed a seemingly isolated, single lane road leading downhill from the rear of the complex so, on the 31st, after the initial session was completed I decided to go for a walk. The road ended up leading to a water treatment plant for the resort, but more important to me, it led to an open area filled with wild flowers and butterflies. It may have been freezing back home, but I was in heaven!
Over the next two afternoons I saw Florida Whites, *Appias drusilla*; Great Southern Whites, *Ascia monuste*; one Cloudless Sulphur, *Phoebis sennae*; one or two Josephina Whites (possibly the same one each day), *Ganya josephina*; several *Eurema daira* v. *eletha* (those two look exactly the same to me); Little Yellows, *E. lisa*; *Strymon hubastus* hairstreaks; Cassius Blues, *Leptotes cassius*; Gulf Fritillaries, *Agraulis vanilla*; one Julia, *Dryas julia*; Zebra Longwings, *Heliconius charithonia*; Red Rims, *Biblis hyperia*; Hairy Duskywings, *Ephyriades arcus*; V-marked Skippers, *Choranthus vitellius*; Three-spotted Skippers, *Cymaenies tripunctus tripunctus*; Tropical Checkered Skippers, *Pyrgus oileus*; one Ocola Skipper, *Panoquina ocola* and a beautiful moth (actually 3 of them), *Composia credula*.

According to a recent book on Puerto Rican Butterflies by Perez-Asso, Genaro and Garrido, 102 species of butterflies have been reported from that island, with *Papilio demoleus* being the most recent addition (2006). Some of the butterflies I saw in Puerto Rico occur regularly in Louisiana (Cloudless Sulphurs, Little Yellows, Great Southern Whites, Gulf Fritillaries, Tropical Checkered Skippers and Ocola Skippers). I have seen others such as the Julia, Florida Whites, Zebra Longwings, Cassius Blues, Red Rims and Giant Whites in Florida and/or south Texas. But I was also lucky enough to see several that do not get into the U.S. The V-marked Skipper, so named in Riley, is only known from Puerto Rico and the nearby Virgin Islands. At least where I was, it was the most common butterfly (I probably saw more than 15 each day). It reminded me of Fiery Skippers, *Hylephilia phyleus*, flying aggressively at anything that came into their area, then returning to a stalk of grass in the sun for a moment before dashing off again.

Another "island lifer" for me were three Hairy Duskywings (again, see Riley), a large spread-winged skipper with the males darkly colored like Zarucco Duskywings, *Erynnis zarucco*, back home. It ranges from Cuba to Puerto Rico.
and the Virgin Islands then down into the Leeward Islands. The Millers reported it as a swift flyer, but all three I saw were placidly taking nectar and easy to approach. The only hairstreak I saw was the Bubastus Hairstreak. At the northern edge of its range in Puerto Rico, it also flies in South America, the Lesser Antilles, and the Virgin Islands. In the field, I thought it was the common *S. columella* but after noting the lack of tails I realized it was something different (see picture). Like the duskywings above, all three were taking nectar at low growing, small white flowers and were easily approached.

**Bubastus Hairstreak**

In the field, I thought it was the common *S. columella* but after noting the lack of tails I realized it was something different (see picture). Like the duskywings above, all three were taking nectar at low growing, small white flowers and were easily approached.

I was pleased to see one kind of skipper that not only was a first for me, but also added to my life-list of the butterfly fauna for the continental U.S. Common in Puerto Rico, the Three-spotted Skipper is reported also from the Bahamas, the Greater Antilles, the Virgin Islands and Florida. According to Glassberg, it is locally common in south Florida as well as the Keys, where it flies beside and is often confused with the Eufala Skipper, *Lerodea eufala*. My references indicate the same subspecies flies in both Puerto Rico and Florida with a different subspecies flying in Mexico and Central America.

In Puerto Rico, it flew in the same disturbed type of habitat as the V-marked Skippers, perching on taller grass stalks, not only along the forest edge but also in open grassy areas within the forest. It stayed mostly in the sun, moving in and out of the shadows. In this regard, it differed from Eufalas, at least in Louisiana, which seem to prefer more open areas. I also found this skipper to be a little larger and darker than Louisiana's Eufala Skippers.

Finally, there was the beautiful day flying moth, *Composia credula*. I have seen several of its cousin, the Faithful Beauty (*C. fidelissima*), in south Florida, and I initially thought that was what I was seeing again. However, once I finally got one of these fast flyers in my net, I quickly realized it was something different. The two pictures on the next page depict not only the differences between the two, but also their beauty.
I left the island early February 2, enjoying blue skies, warm temperatures and a mild breeze. When I landed back in Louisiana at around 4:30 pm, the temperatures were hovering just above freezing with a strong, biting wind. The forecast was for the temperatures to drop down into the 20's overnight in the face of an approaching ice storm. Local schools had already been closed in anticipation of ice accumulation. As I sat shivering in my car (come on, who takes a coat to Puerto Rico?), I had to smile as I thought of all those tropical butterflies which were, at that moment, flying along the quiet, narrow road below the resort, two time zones to the east.

Next year the conference is in Aruba, and I'm already Aruba-dreaming.

References


(Craig W. Marks, E-Mail: cmarks@landcoast.com)

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MANY THANKS TO THE FOLLOWING DONORS
[DONATIONS TO SLS (March to June, 2011)]

Leroy Koehn (Contributor)  
Eric Anderson  
Jackie Miller (Contributor)  
Marc Minno (Benefactor)  
Gary Ross (Benefactor)  
Frances Weldon (Contributor)  
Rosemary Seidler (Contributor)  
Joann Kargas (Contributor)  
Lawrence Gall (Benefactor)  
Charles Garner (Benefactor)  
Reid Watkins (Sustaining)  
Tom Emmel (Benefactor)
In the world of lepidoptera, it's not common to find a species where all stages have bold and beautiful colors. Guava Skippers are one of the exceptions. The eggs are a deep purple, the early instar caterpillars a bright red color, and the adults are spectacular in iridescent blue hues.

Cat Traylor provided me with three eggs for this study. The caterpillars emerged on August 15, and immediately cut out leaf shelters such as the one in the 8-17 picture. As the caterpillars grew bigger they would sew leaves together to form their shelters. It seemed there was a significant change of appearance in almost every instar: first yellow stripes appeared, then eye spots that soon seemed to glow, and then in the last instars the purple and yellow caterpillar turned white!

The caterpillars seemed to grow at a good pace, but they took a full month to mature. This resulted in mature caterpillars that seemed unusually large for the size of skipper that would emerge - the last instars were quite chunky. The adults emerged 11-12 days after pupation began.

Many thanks to Cat Traylor for providing the eggs and also cuttings from her Guava tree.
Mature caterpillar, 16-IX-2010

Chrysalis, 17-IX-2010

Fresh adult Guava skipper (ventral) 26-IX-2010

Fresh adult Guava Skipper (dorsal) 26-IX-2010

(The Editor thanks Mr. Berry Nall for permission to republish his butterfly life histories in the SLS NEWS; his website which contains life histories of numerous butterflies from our SLS region is located at http://leps.thenalls.net/index.php. Specifically, his Guava Skipper website is located at: <http://leps.thenalls.net/content2.php?ref=Species/Eudaminae/polybius/life/polybius_life.htm>)

JAMES' CONTINUING CHALLENGE

James Adams is continuing his challenge in 2011 to the SLS membership to write articles on the “Dangers of Lepping” and “First Encounters”. He will donate to the Society $10 for each article up to $100 dollars for the year.

I neglected to mention (in the March issue of 2011) that for the December issue of 2010 he donated $20 for two such articles. Many thanks to James. [The Editor]
CATERPILLARS IN MY POND
BY
LAWRENCE J. HRIBAR

I maintain two fish ponds in my yard in Marathon, Florida. One is stocked with goldfish, *Carassius auratus auratus* (L.) and koi, *Cypinus carpio carpio* (L.) (Cyprinidae); the other with guppies, *Poecilia reticulata* Peters (Poeciliidae). The guppy pond supports a thriving crop of green algae (unidentified) and three ornamental aquatic plant species: water lily, *Nymphaea* sp. (probably *N. colorata* Peter) (Nymphaeaceae); big floating heart, *Nymphoides aquatica* (J.F. Gmel.) Kuntze (Menyanthaceae) — also known as banana plant; and *Egeria densa* Planchon (Hygrocharitaceae), formerly in genus *Elodea*, sold in the aquarium trade as anacharis.

In early March of 2011, I noticed some small caterpillars on the leaves of the water lily. A couple of days later I noticed that there was extensive damage to the water lily leaves. The caterpillars had skeletonized the leaves and had grown in size. I watched one of the larger individuals feeding on leaves of *E. densa*. Others were feeding on the water lily. I did not see any feeding on the big floating heart, nor on the algae. Some of the big floating heart leaves were damaged, but this may have been due to feeding by snails. At least two species of snails live in the pond: ramshorn snails (Planorbidae) and pond snails (Lymnaeidae). I collected six of the caterpillars and sent them to the USDA-APHIS-PPQ office in Gainesville for identification. Julieta Brambila of that laboratory, Lyle Buss of the University of Florida, and James Hayden of the Florida State Collection of Arthropods determined that they were southern armyworms, *Spodoptera eridania* (Cramer) (Noctuidae). The specimens have been deposited into the Florida State Collection of Arthropods (E2011-1628-1). The southern armyworm has a very broad host range, including crops, ornamentals, and weeds; at least 117 plants have been reported as hosts (Heppner, 2003). This appears to be the first observation of this caterpillar feeding on *E. densa* and *Nymphaea*. On the 27th of March I again noticed two larvae in the same pond; one on a leaf of *Nymphaea*, the other on a leaf of *N. aquatica*. Neither was seen to feed.

Reference


(Larry Hribar, P.O. Box 522479, Marathon Shores, Florida 33052; E-Mail: Elhribar@keysmosquito.org)
April was a bad month for Texas in terms of fires. Due to the State’s extreme dry conditions because of the continuing drought, gusty high winds, and unseasonably high temperatures and low humidity, fires have been recorded in all but two of the 254 counties in Texas. Thus far 1800 firefighters from 36 states have been helping to contain the fires. In addition, the Texas National Guard, Apache helicopters, and military cargo planes have been involved in the fight against these devastating fires. Tragically, three people including two firefighters have lost their lives in these fires. Approximately 2 million acres in Texas have been burnt along with an estimated 400 homes destroyed. The preceding month of March, 2011, has been recorded by the Texas Forest Service to be the driest March on record.

In West Texas (Editor’s part of the State) ~400,000 acres have burned with ~203,000 acres in Jeff Davis County where the town of Fort Davis, the Davis Mountains State Park, the Chihuahuan Desert Research Institute, and the McDonald Observatory are located. The fires in Jeff Davis County have been burning for 2 weeks. The Davis Mountains State Park and surrounding countryside are prime areas for both butterfly and moth collecting. This area is the home of the extremely beautiful Arctiid, the Northern Giant Flag Moth, *Dysschema howardi* (Hy. Edwards, [1887]).

An interesting aside in fire fighting is that the Texas Forest Service will plan a controlled burn in the Fort Davis area to destroy an additional 70,000 areas to eliminate shrub which are in the fire’s path and thus will remove fuel for the continuing fires which at this writing (April 28th) were only 75% contained. It is estimated that the fires are costing the State of Texas 2 million dollars per day. In the final analysis some good will certainly result from these fires which clear the brush from the hillsides and allow new growth to flourish. However, for the 30 homeowners who lost their homes in the area it is still truly a tragedy.

The photographs by Frank Cianciolo show the fires (both wild and controlled) around McDonald Observatory.
The Southern Area Incident Management Team undertook controlled burns on Sunday, April 17, 2011, to get rid of fuel on the mountains around McDonald Observatory. This would starve the Rock House wildfire of fuel should it head back in our direction. Here, Black Mountain is burning. The Hobby-Eberly Telescope (HET) dome is at right. Above it, the bright line on the right is the wildfire which broke through a burn-out line on Sunday afternoon. The bright line on the left is the front of a back-fire set to stop that portion of the wildfire. Silhouetted by the back-fires on Black and Spring (to the left) Mountains is Guide Peak now with only small pockets of active fires (Credit: Frank Cianciolo/McDonald Observatory).

This view of the Rock House wildfire was shot on the night of April 9, 2011, overlooking the dome of the 0.9-meter Telescope (Credit: Frank Cianciolo/McDonald Observatory).

Guide Peak in flames from the controlled burn undertaken by the Southern Area Incident Management Team on April 17, 2011. The Two peaks of McDonald Observatory, Mount Fowlkes and Mount Locke, are to the right and far right, respectively. The domes of the 9.1-meter Hobby-Eberly, 2.7-meter Harlan J. Smith, and 2.1-meter Otto Struve Telescopes are visible (Credit: Frank Cianciolo/McDonald Observatory).
The Southern Area Incident Management Team undertook controlled burns on Sunday, April 17, 2011, to get rid of fuel on the mountains around McDonald Observatory. This would starve the Rock House wildfire of fuel should it head back in our direction. This shot shows Guide Peak, to the north of the Hobby-Eberly Telescope (HET), almost completely burned (Credit: Frank Cianciolo/McDonald Observatory).

Fig. 6. HET AND CONTROLLED BURN ON GUIDE PEAK. The Southern Area Incident Management Team undertook controlled burns on Sunday, April 17, 2011, to get rid of fuel on the mountains around McDonald Observatory. This would starve the Rock House wildfire of fuel should it head back in our direction. This shot shows Guide Peak, to the north of the Hobby-Eberly Telescope (HET), almost completely burned (Credit: Frank Cianciolo/McDonald Observatory).

Fig. 7. WIDE SHOT OF CONTROLLED BURNS NEAR HET. The Southern Area Incident Management Team undertook controlled burns on Sunday, April 17, 2011, to get rid of fuel on the mountains around McDonald Observatory. This would starve the Rock House wildfire of fuel should it head back in our direction. The Hobby-Eberly Telescope (HET) dome is at right (Credit: Frank Cianciolo/McDonald Observatory).

[The Editor and the Members of the Southern Lepidopterists' Society thank Frank Cianciolo for allowing us to use his impressive photographs in the NEWS of the SLS that were initially posted on the McDonald Observatory public website (in the image gallery pages, <http://mcdonaldobservatory.org/news/gallery/gallery.php?q=28>). Frank Cianciolo, Sr. Program Coordinator, can be contacted at the McDonald Obs/Bash Visitors Center/University of Texas at Austin, 3640 Dark Sky Drive, McDonald Obs., TX 79734 (Phone: 432-426-4152)].

CALL FOR ARTICLES

Dear SLS Members:

I am trying to take up space and thought that a somewhat clever way was to ask you, the SL Society membership, for articles. The NEWS is only as good as the articles that I receive and while a certain few members submit excellent material on a regular basis, I cannot expect these few to continuously submit articles and other items of hopefully interest to the Society members. Thus, I am asking all of those individuals of the SL Society, and we are approximately a total of 170 members, who have never submitted anything to be published in the NEWS, to please consider writing something - and/or send me some photographs of your field trips.

Many thanks,

The Editor

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DEFINITION:

Salt Marsh - a wet area that usually has brackish water and plants (rushes, sedges, and grasses) that thrive in a salty environment. Salt marshes are many times overlooked for their importance to the ecosystem. They provide both a nursery area and a sanctuary for many young fish and crustaceans. The salt marsh has an abundance of insects which provides food for many of the larger inhabitants.

*****************************

REVISITING THE NONCOMMERCIAL COLLECTION OF FAUNA BY U.S. NATIONAL FOREST VISITORS IN 2011

BY

VERNON ANTOINE BROU JR.

In early 2011, I encountered a Wildlife Biologist of Kisatchie National Forest who insisted that a permit was required to collect insects on National Forest Lands. I immediately informed him I had a document from the National Forest Service (See News of The Lepidopterists Society Vol. 40:4) indicating that permits were not required to collect insects on National Forest lands. He inferred that it made no difference what I had and my response appeared to provoke his ire. He was insistent that I would have to obtain a permit. Prior to this event, I had a cordial relationship with several of the District Rangers for nearly 30 years of collecting insects at this location never previously requiring such a permit.

Subsequent to this latest interaction, I spent a week E-mailing and calling the National Forest Service to get a copy of the current policy regarding this issue. A search of the regulations on accessible on line via the web resulted in frustration.

I spoke with numerous personnel at The NF headquarters and Regional Offices and was assured someone was working on the issue. I requested that it would be advantageous to revisit the matter so as to address all NF lands in a manner for disseminating to all concerned across the US. They agreed.

Here is the 2011 response (on page 57) to the issue of collecting not only insects but any fauna of NF lands. It would be advisable to carry a copy of this 2011 document with you when collecting on NF Lands. Persons wishing to obtain this article via pdf can link to:


(Vernon Antoine Brou Jr., 74320 Jack Loyd Road, Abita Springs, Louisiana 70420 USA; E-Mail: vabrou@bellsouth.net)
Mr. Vernon Antoine Brou Jr.
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Dear Mr. Brou:

Thank you for your April 4, email to Randy Karstaedt concerning the current Forest Service direction related to the noncommercial collection of insects on National Forest System (NFS) lands. Mr. Karstaedt was the Forest Service contact in 1998 but has since moved on to become the Rocky Mountain Director of Physical Resources in Region 2.

The Southern Region (Region 8) has developed supplemental direction regarding the noncommercial collection of insects on NFS lands. This direction can be found in R8 Supplement 2700-2006-1, Forest Service Manual 2700 - Special Use Management, Chapter 2720 - Special Uses Administration; Section 2724 - Feasibility, Research, Training, Cultural Resources, and Historical, Subsection 2724.2 - Research, which is as follows:

2724 – FEASIBILITY, RESEARCH, TRAINING, CULTURAL RESOURCES, AND HISTORICAL
2724.2 – Research

1. Plant collecting for any purpose is not authorized by a special use authorization. See FSH 2409.18, Section 87 – Sale of Special Forest Products, for direction.

2. The noncommercial collection of fauna by Forest visitors, either in small groups or by individuals in pursuit of a personal interest, should be managed as a noncommercial recreational activity which, pursuant to 36 CFR 251.50, does not require a special use authorization. Groups of 75 or more people, require a Noncommercial Group Use Permit.

3. An authorization is required for organized collecting activities that charge a participation fee as defined in 36 CFR 251.51 Commercial use or activity.

4. Forest Supervisors may regulate uses through a closure order under 36 CFR 261.53, or by imposing conditions on the possession, storage, or transportation of fauna under 36 CFR 261.58(s).

5. All parties engaged in this type of activity, whether commercial or noncommercial, recreational or non-recreational, are obligated to comply with Forest Service Orders and with other Federal, State, and local laws and regulations that may apply to fauna collecting activities on National Forest System lands. These include, but are not limited to state wildlife and/or agricultural regulations, regulations designed to protect threatened or endangered species pursuant to the Endangered Species Act, and requirements to maintain viable populations pursuant to the National Forest Management Act.

Outside of the Southern Region, the direction that was distributed in 1998 is still to be followed by Forest Service employees. Generally, the noncommercial collection of insects, by individuals or small groups, does not require a special use authorization. If the collecting is done as a commercial enterprise, or if that collection should require the placement of temporary collection improvements on NFS lands, then a permit would be required. Also, if the species to be collected were considered threatened or endangered, then a permit from the U. S. Fish and Wildlife Service would be required. In some cases, the Forest Service may prohibit collecting in certain areas through a Forest Service closure order. You would need to check for these restrictions before conducting any collection activities.

Sincerely,

ANDREW COLANINNO
Director of Lands, Minerals and Uses
DEFINITIONS:

**Aposematism** - in the simplest definition *aposematism* primarily describes the organism’s use of bright, very conspicuous markings and coloration to warn a predator that it is dangerous, e.g., being poisonous or having a noxious taste. The predator has learned from experience having made the mistake in the past of attacking or eating the *aposematic* organism and thus avoids that particular species in the future.

However, warning coloration is not the only method that the organism may use to warn its predator. Other methodologies are also used such as warning sounds, odors, or behavior. The final result is that both the predator and the prey benefit. The predator avoids the bad experience by not attacking the prey, and the prey is not attacked and thus lives for the future.


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**Crypsis** - the ability of an organism to hide, *i.e.*, avoid observation, from its predators by blending into its environment. The word *camouflage* is sometimes used as a definition but *camouflage* also has a bit broader definition in that it can mean concealment by a predator to capture its prey. *Crypsis* is the antithesis of *aposematism*.


The best photograph that I (JBL) have seen depicting *crypsis* is by Lior Golgher who described the following when

![Find the hidden frog (photograph by Lior Golgher).](image-url)
he was in Brazil with his guide Francisco. Lior stated that Francisco "... noticed the frog from a walking height while I couldn’t find it with his finger pointing right at it. Even after detecting it, I couldn’t see it on the camera screen, so I just identified adjacent objects (probably the branch to its right) and brought them into frame."

**Description:** A well camouflaged frog in the Lower Rio Branco-Rio Jauaperi Extractive Reserve, Brazil.

**Hint:** The frog is just to the left of the top end of the vertical stick.

If you have found the frog, congratulations you have excellent discriminatory vision. **IF NOT AND YOU GIVE UP, PLEASE GO TO PAGE 69!!!**


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**Reakirt's Blue** (*Echinargus isola*)

**Silver-spotted Skipper** (*Epargyreus clarus*)

Photographs submitted by Ro Wauer were photographed at Lick Creek Park, Brazos Co., TX, (near College Station) during April and May of 2011 (see Ro’s Texas State Report on page 80).
RAPID ASSESSMENT OF ELEVATIONAL ZONATION AND BIODIVERSITY IN ECUADORIAN BUTTERFLY FAUNAS
BY
LANCE A. DURDEN1 AND MARK WELFORD2

With the unprecedented destruction of tropical habitats worldwide, there is a need for rapid ecological assessments of sites targeted for modified land use (Singer and Ehrlich, 1991; Sparrow et al., 1994; Ghazoul, 2002). In 1967, oil was discovered in eastern Ecuador. In order to export this oil, a 499 km long pipeline was constructed across the Andes to coastal regions (Gerlach, 2003). The pipeline has since been enlarged several times and, in 2002, construction of another oil pipeline was begun (Gerlach, 2003). The two pipelines cross the eastern cordillera of the Andes at Papallacta Pass but, rather than following the first pipeline on the western slope of the Andes down the Chiriboga road – already a highly disturbed corridor (Stattersfield et al., 1998) – a new route was chosen for the second pipeline adjacent to Yanacocha and through the upper section of the Tandayapa Valley. Large tracts of land, ranging from lowland tropical Amazonian rainforest to high elevation páramo habitats were impacted by this activity. Because of the rapid land clearing associated with the construction of these pipelines, it would be advantageous to be able to rapidly assess the ecological attributes of these sites prior to their destruction or modification. Other land use changes such as deforestation for cattle ranching, cultivation, and charcoal production (Stattersfield et al., 1998; Ridgely and Greenfield, 2001) and sprawling urbanization particularly surrounding Quito also point to the need for rapid ecological assessments in Ecuador.

Butterflies can be excellent indicators of habitat quality and other attributes such as elevational zonation (Ehrlich et al., 1994; Sparrow et al., 1994; Beccaloni & Gaston, 1995; Ghazoul, 2002; Simonson et al., 2001). Not only can they directly demonstrate the biodiversity of an important group of indicator invertebrates but they can also reflect plant diversity since their larvae are almost exclusively phytophagous. Ecuador straddles the equator and has a wide range of elevations because the Andean cordillera bisects the country from the northeast to the southwest. Because this elevational diversity often occurs within a relatively small area, we were able to complete a rapid assessment of the elevational zonation and biodiversity of Ecuadorian butterflies based on data from four relatively adjacent sampling sites during a single month.

Materials and Methods

Butterflies were recorded at four sites in central/eastern Ecuador in June 2002. These sites were:

1) Papallacta Pass (78.12W, 0.02S), in the eastern Andean cordillera (Napo Province), at elevations of ~2,900 – 4,070 m;
2) Reserva Ecologia Yanacocha (78.33W, 0.10S), in the western Andean cordillera (Pichincha Province) at ~3,600 m;
3) Tandayapa Valley (78.42W, 0.01S), also in the western Andean cordillera (Pichincha Province) at ~1,750 m;
4) Tiputini Biodiversity Station (76.80W, 0.38S), in the Amazon Basin east of the Andes (Orellana Province) at ~200 m.

All four sites are located within a linear distance of ~220 km; the first three sites listed are within a linear distance of ~65 km of each other. The Papallacta Pass site represents high Andean páramo grasslands with short ground-level vegetation and patches of Polylepis trees, stunted elfin trees and arable crops. Reserva Ecologia Yanacocha (maintained by Fundacion Jocotoco) is a conservation park located on a side vent of Volcán Guagua Pichincha (volcano elevation, 4,675 m). Because it has been a principal water source for the City of Quito for centuries (Ridgely...
and Greenfield, 2001) and it also lies on the blast zone of Volcán Guagua Pichincha, the western slope is more forested (with stunted elfin and Polylepis trees) than the Papallacta site, despite being at similar elevation. However, the Yanacocha site also includes some páramo grasslands. Topography at both the Papallacta and Yanacocha sites is mountainous and night-time temperatures can dip below freezing. The third site visited was the Tandayapa Bird Lodge in the Tandayapa Valley on the edge of the Chocó subregion. This lower montane cloud forest site is fairly heavily forested along rich orogenous valleys but the height of emergent trees is significantly less than that at the Tiputini site and vegetational species composition was clearly different. The Tiputini site is characterized by classical evergreen tropical lowland Amazon Basin rain forest with large emergent trees above the main forest canopy and a light-restricted ground level with sparser vegetation. Many trees at both the Tandayapa and Tiputini sites are coated with epiphytes. We recorded butterflies at Papallacta for one day, Yanacocha for one day, Tandayapa for three days, and Tiputini for four days, all during June 2002.

Butterflies were recorded at each site by observation, photography or collection of specimens using a traditional hand-held 46 cm diameter butterfly net with a 60 cm handle. Specimens were captured, observed or photographed at ground-level; several canopy-frequenting species (DeVries et al., 1997; Murray, 2000; DeVries & Walla, 2001) were not therefore recorded especially at the Tiputini site which is characterized by significant arboreal stratification. Generally, specimens were captured, identified and released. Specimens that could not be identified in the field, were either photographed or kept as voucher specimens and identified later. Pinned, labeled voucher specimens collected during this study are deposited in the Museo Ecuatoriano de Ciencias Naturales, Quito. Guides used for identifying specimens were Espinosa et al. (1977), DeVries (1987), Piñas-Rubio and Manzano-Pesantez (1997) and Garwood et al. (2007) for various groups, D’Abrera (1981) and Bollino and Onore (2001) for Papilionidae and/or Pieridae, D’Abrera (1984, 1987a, 1987b, 1988) for Nymphalidae, D’Abrera (1994) and DeVries (1997) for Riodinidae, D’Abrera (1995) for Lycaenidae, and Evans (1952, 1953, 1955) and Lewis (1987) for Hesperiidae. Reliable Internet identification guides were also used especially for Ithomiinae and Hesperiidae. A few specimens were kindly identified by Drs. Jason Hall (Smithsonian Institution) and Keith Willmott (University of Florida).

Results

We recorded 24 different species of butterflies at Papallacta, 10 at Yanacocha, 27 at Tandayapa, and 208 at Tiputini (Tables 1-4). The butterfly faunal compositions recorded at each site were very different with the faunas at Tandayapa and Tiputini being most similar to each other (4 shared species, 11 shared genera) and those of Yanacocha and Tiputini being most different [no shared species or genera (Table 5)].

In Tables 1-4, a question mark following a taxon name implies that we are not absolutely certain of the identity of the specimen(s); however, question-marked species are definitely different from any of the others listed in the Tables. Further, a few of the skippers (Hesperiidae) could be distinguished from each other but could not be identified to species. Skippers in this category are placed in their appropriate genus in the Tables and further listed as species # 1 or # 2 in order to distinguish them.

We recorded some taxa that are not included in the Ecuador butterfly lists of Espinosa et al. (1997) (Tables 1, 3, and 4). However, some of these species have been reported from Ecuador by other workers (D’Abrera 1981, 1984, 1987a, 1987b, 1988, 1994; DeVries et al. 1997; Piñas-Rubio and Manzano-
Pesántez 1997; Murray 2000; Bollino and Onore 2001). We also recorded at least one undescribed species (Rhamma n. sp., a lycaenid at Tandayapa, identified by Jason Hall). Elevational zonation was also pronounced especially between Andean and lowland rainforest taxa as discussed with specific examples in the following section. Nevertheless, a small number of species were recorded at more than one elevation including two wide-ranging species at both the high Andean Papallacta site and the lowland Amazonian site (the nymphaline Junonia evarete and the skipper Heliopetes alana).

**Discussion**

Each of the four sites we sampled was characterized by very different butterfly faunas (Tables 1-5) with elevational zonation being distinct. The Papallacta site was characterized by relatively low butterfly abundance (personal observations) and by a mixture of Andean endemics and “generalist” species, the latter typically occupying large geographical ranges especially to the north. Twelve (50%) of the butterfly species we recorded at Papallacta can be considered to be Andean endemics (D’Abrera, 1981, 1988; Espinosa et al., 1997): the papilionid Papilio polyxenes sardalus, the pierids Colias lesbia, Colias mossii, Catasticta susiana, Leptophibia philoma, Tatochila macrodice artodice, Tatochila sagittata, Tatochila xanthodice, and the nymphalids Vanessa altissima, Vanessa carve, Erichthodes ericho and Pedialodes asconia. In fact, most known species in the genus Tatochila are Andean endemics (D’Abrera, 1981; Espinosa et al., 1997), suggesting that the genus evolved in this region. Not surprisingly, the Andean cordillera has apparently had a major impact on butterfly speciation (Willmott et al., 2001). Remarkably, the “generalist” species we recorded also all occur in the Nearctic zoogeographical region, but almost exclusively in the very southern zones of that region (Scott, 1986; Smith et al., 1994). At the Papallacta site, 9 of the 24 (38%) species we recorded also occur in the Nearctic region. These are the papilionid Papilio polyxenes, the pierids Zerene cecsonia and Ascia monuste, the nymphalids Euptoieta claudia, Junonia evarete, Vanessa virginiensis, Danaus plexippus and Agraulus vanillae, and the hesperiid Urbanus proteus. However, some of the subspecies of these butterflies that we recorded, such as P. polyxenes sardalus, appear to be Andean endemics (Espinosa et al., 1997).

Our limited records for Yanacocha suggest that the butterfly fauna at this site is very unique with only one shared species (the lycaenid, Thoela coronata, which was also recorded at Papallacta) with any of the other three sites. In fact, T. coronata has been recorded from a wide range of elevations in the neotropics (D’Abrera, 1995). The uniqueness the Yanacocha fauna is underlined in Table 5 which shows that the butterfly species and genera we recorded there differed most between this site and any of the others. Unlike our Papallacta, Tandayapa and Tiputini records, we found no butterflies with Nearctic affiliations at Yanacocha. The apparent uniqueness of this site warrants further biological investigations. Such uniqueness is not limited to the butterfly fauna; the bird fauna is also unusual. The critically endangered puffleg, Eriocnemus nigrivestis (Bourcier and Mulsant), is found on only one other volcano (Del Hoyo et al., 1999; Ridgely and Greenfield, 2001). Also, the near threatened snipe, Galinago imperialis Sclater and Salvin, in Ecuador known only from eastern cordillera
specimens, has been observed at Yanacocha (Ridgely and Greenfield, 2001).

The butterfly fauna we recorded at Tandayapa was very different from the Andean faunas at Papallacta and Yanacocha and was most similar to that recorded at Tiputini (Table 5). However, the Tandayapa fauna was relatively unique and included the only undescribed species of this study. At this mid-elevational site, representatives of some characteristically lowland neotropical butterfly subfamilies, such as charaxines, ithomiines and heliconiines, were recorded (Table 3). However, this site was too high for representatives of other lowland neotropical groups such as members of the Morphini. Nevertheless, high and mid-elevational taxa such as *Pedialodes* spp. (Satyrinae) were relatively common at this site. Tandayapa evidently has a transitional butterfly fauna somewhat intermediate between that of the high Andes and the lowland Amazon Basin. One of 27 species (4%) recorded at Tandayapa, the lycænid *Everes comyntas* (identified by Jason Hall) has a strong Nearctic affiliation and is common in large areas of eastern and central North America (Scott, 1986).

Tiputini had by far the most diverse butterfly fauna (208 species) of any of the sites we assessed (Table 4). Predictably, it had a characteristic lowland Amazon Basin butterfly fauna with abundant ithomiines, brassolines, rioidinids, and partially clear-winged ground-frequenting satyrines in the forest understory and abundant papilionids, pierids, hesperiids and certain nymphalids in forest clearings and along river banks. Dismorphine pierids, heliconiines and certain satyrines, limenitidines and nymphalines frequented other forest sites including grassy areas near cabins or bodies of water. The Tiputini butterfly fauna that we recorded was clearly specialized but was most similar to that of Tandayapa and least similar to that of Yanacocha (Table 5). Two species (*J. evarete* and *H. alana*) were recorded at both Tiputini and Papallacta (Tables 2, 4) demonstrating that some butterflies were not restricted by elevation in this study. Of the 208 species recorded at Tiputini, 23 (11%) of these also occur in the southern reaches of the Nearctic region (Scott, 1986; Smith et al., 1994). These are the papilionid *Papilio anchisades*, the pierids *Eurema nisse*, *Phoebis argante* and *Phoebis statira*, the nymphalids *Diaethria clymene*, *Hamadryas amphinome*, *Marpesia ciron*, *Marpesia petreus*, *Junonia evarae*, *Siproeta stelenes*, *Libytheana carinula*, *Doxocopa pavon*, and *Dryas iulia*, and the hesperiids *Astraptes fulgerator*, *Carrhenes canescens*, *Cogia calchas*, *Gorgython begga*, *Heloipetes arsalia*, *Pellicia dimidiata*, *Polythrix octomaculata*, *Urbanus dorantes*, *Urbanus simplicius* and *Xenophanes tryxus*. However, some of these species such as *L. carinula* are represented by different subspecies in the two zoogeographical regions (Espinosa et al., 1997; Scott, 1986). The butterfly fauna we recorded in four days at Tiputini appears to have many similarities to the more extensive fauna (811 species) recorded during a four-year survey by Murray (2000) at Jatun Sacha (01.04S, 77.36W), a lowland Ecuadorian site (elevation, 400-450 m) about 90 km to the northwest of Tiputini.

In addition to the elevational zonation we noted, some butterfly taxa appear to be restricted to either the western slope of the Andes and the western Andean cordillera or eastern slope of the Andes and eastern Andean cordillera (Espinosa et al., 1997; Willmott et al., 2001). Several biogeographical boundaries seem to occur in the region; the first appears to run down the central valley of Ecuador that separates the western and eastern Andean cordilleras; the second occurs at the upper-treeline on the western slope of the western Andean cordillera; and the third at the upper-treeline of the east slope of the eastern cordillera (Stattersfield et al., 1998). Because two of the sites we surveyed (Yanacocha and Tandayapa) are situated on the west slope of the western cordillera and one site (Papallacta) is situated on the eastern
cordillera, some of our data are relevant to this phenomenon. Also, Tiputini is well to the east of the Andean cordillera. Clearly, the four species that we recorded at both Tandayapa and Tiputini (Tables 1 and 4) and the one species we recorded at both Papallacta and Yanacocha are not restricted to either side of the Andes. However, some other species do appear to be restricted to one side. Our data are too limited to provide definitive statements on this but many of the Tiputini species listed in Table 4 appear to be restricted to the east of the Andes (several of them are also Amazonian endemics). In addition, our data, in combination with other reports (D’Abrera, 1984, 1987a,b, 1988; Espinosa et al., 1997), suggest that some of the butterflies we recorded at Yanacocha or Tandayapa are restricted to the western Andean slope. Butterflies in this category are the nymphalids Actinote oozemene, Greta andromica, Ithomia terra terrana, Cissia alcinoe, Euptethia inornata, Pedialodes peucetas, and Steremnia monachella, and the lycaenids E. comyntas and Rhamma n. sp.

Overall, our rapid (1-4 days at each site) assessments of four butterfly faunas in Ecuador highlight differences in biodiversity and elevational zonation between the sites. Extended surveys of at least one year duration would be required at each site in order to accommodate seasonal phenomena and to obtain a more complete picture of these butterfly faunas. Unfortunately, the luxury of having a year (or even a month) of survey data is not always feasible, especially in the tropics, for assessing the biological attributes of threatened ecological sites. Therefore, rapid surveys of indicator species such as butterflies may become more common in the future.

Acknowledgements

Fieldwork in Ecuador was funded by a Research Excellence Award from Georgia Southern University and a University System of Georgia Global Partnership Grant. We are indebted to Drs. Jason P. W. Hall (U.S. National Museum of Natural History, Smithsonian Institution, Washington DC) and Keith R. Willmott (McGuire Center for Lepidoptera and Biodiversity, University of Florida) for identifying some of the butterflies encountered during this study. Dr. David Romo (Pontifica Universidad Católica del Ecuador, Quito) facilitated securing a scientific collecting permit and Juan Veintimillia (Quito) provided logistical support in the field.

References

TABLE 1. Butterflies recorded at Reserva Ecologia Yanacocha, Ecuador (western codillera of Andes mountains), ~3,600 m elevation, June 2002.

<table>
<thead>
<tr>
<th>FAMILY NYMPHALIDAE (6 species)</th>
<th>FAMILY LYCAENIDAE (2 species)</th>
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<td>SUBFAMILY SATYRINAE (6 species)</td>
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<td>Lymanopoda nivea bingo Pyrcez</td>
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<td>Pedalodes chrysotoe/ia (Hopfier)</td>
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<td>Pedalodes moroeroi (Dognin)</td>
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<td>Pedalodes polia (Thieme)</td>
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<td>Steremn/t monachella (Weymer)</td>
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<table>
<thead>
<tr>
<th>FAMILY HESPERIIDAE (2 species)</th>
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<tr>
<td>Dalla agathocles (Felder and Felder)</td>
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<td>Molo sp. #1</td>
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TOTAL SPECIES – 10

1Department of Biology, and 2Department of Geology and Geography, Georgia Southern University, Statesboro, Georgia 30460, USA.

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<thead>
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TABLE 3. Butterflies recorded at Tandayapa Bird Lodge, Ecuador, ~1,750 m elevation (western slope of Andes mountains), June 2002.

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<tr>
<td></td>
<td>Rhamma n. sp.</td>
</tr>
<tr>
<td></td>
<td>Thecla aegides (Felder)</td>
</tr>
<tr>
<td>FAMILY NYPHALIDAE</td>
<td>Actinote ozomene (Godart)</td>
</tr>
<tr>
<td>SUBFAMILY CHARAXINA</td>
<td>Marpesia coresia (Godart)</td>
</tr>
<tr>
<td>SUBFAMILY HELICONIINA</td>
<td>Philaethria dido (L.)</td>
</tr>
<tr>
<td>SUBFAMILY LIMENITIDINA</td>
<td>Adelpha collina (Hewitson)</td>
</tr>
<tr>
<td></td>
<td>Diaethria clymena (Cramer)</td>
</tr>
<tr>
<td></td>
<td>Diaethria marchali (Guérin-Meneville)</td>
</tr>
<tr>
<td>SUBFAMILY SATYRINAE</td>
<td>Cissia alcinoe (Felder &amp; Felder)</td>
</tr>
<tr>
<td></td>
<td>Euptychia inornata (Felder)?</td>
</tr>
<tr>
<td></td>
<td>Pedialodes drymaea (Hewitson)</td>
</tr>
<tr>
<td></td>
<td>Pedialodes phrasis (Grose-Smith)</td>
</tr>
<tr>
<td>FAMILY HESPERIIDAE</td>
<td>Bolla sp. # 2</td>
</tr>
<tr>
<td></td>
<td>Callimormus gracilis (Felder)</td>
</tr>
<tr>
<td></td>
<td>Eutocus sp. # 1</td>
</tr>
<tr>
<td></td>
<td>Eutychide sp. # 1</td>
</tr>
<tr>
<td></td>
<td>Molo sp. # 2</td>
</tr>
<tr>
<td></td>
<td>Morys sp. # 2</td>
</tr>
<tr>
<td>TOTAL SPECIES – 27</td>
<td></td>
</tr>
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</table>
TABLE 4. Butterflies recorded at Tiputini Biodiversity Station, Ecuador (lowland Amazonian rain forest, east of Andes mountains), ~200 m elevation, June 2002.

<table>
<thead>
<tr>
<th>FAMILY PAPILIONIDAE (7 species)</th>
<th>Hamadryas amphimene (L.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eurytides euris (Rothschild and Jordan)</td>
<td>Marpesia berarzia (Hewitson)</td>
</tr>
<tr>
<td>Graphium agesilaus (Guérin-Meneville and Percheron)</td>
<td>Marpesia chiron (Fabricius)</td>
</tr>
<tr>
<td>Papilio anchisades Esper</td>
<td>Marpesia crethon (Fabricius)</td>
</tr>
<tr>
<td>Papilio torquatus (Cramer)</td>
<td>Marpesia hermon (Felder and Felder)</td>
</tr>
<tr>
<td>Parides lysander (Cramer)</td>
<td>Marpesia petreus (Cramer)</td>
</tr>
<tr>
<td>Parides sesostris (Cramer)</td>
<td>Panacea diavalis (Bates)</td>
</tr>
<tr>
<td>Protesilaus telesilaus (Felder and Felder)</td>
<td>Paulogramma peristera (Hewitson)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FAMILY PIERIDAE (21 species)</th>
<th>Perierga lamia (Cramer)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dismorphia pinthons (L.)</td>
<td>Pyrrhogrya clymena (Hewitson)</td>
</tr>
<tr>
<td>Dismorphia theucarilla erythoe (Bates)</td>
<td>Pyrrhogrya venata (L.)</td>
</tr>
<tr>
<td>Enantia licinia (Cramer)</td>
<td>Pyrrhogrya otolais (Bates)</td>
</tr>
<tr>
<td>SUBFAMILY COLIADINAE (11 species)</td>
<td>Temenis laothoe (Cramer)</td>
</tr>
<tr>
<td>Eurema agave (Cramer)</td>
<td>Temenis pulchra (Hewitson)</td>
</tr>
<tr>
<td>Eurema albula (Cramer)</td>
<td>Tigridia acetata (L.)</td>
</tr>
<tr>
<td>Eurema elathea vitellina (Cramer)</td>
<td>SUBFAMILY Nymphalinae (9 species)</td>
</tr>
<tr>
<td>Eurema nise (Cramer)</td>
<td>Anartia amathea (L.)</td>
</tr>
<tr>
<td>Eurema venusta (Boisduval)</td>
<td>Castilia perilla (Hewitson)</td>
</tr>
<tr>
<td>Eurema xanthochlora (Kollar)</td>
<td>Erestia clara (Bates)</td>
</tr>
<tr>
<td>Phoebeis argante (Fabricius)</td>
<td>Erestia eunice (Hübner)</td>
</tr>
<tr>
<td>Phoebeis boursiki (Dixey)</td>
<td>Junonia evarete (Cramer)</td>
</tr>
<tr>
<td>Phoebeis rufina (Cramer)</td>
<td>Metamorpha elissa Hübner</td>
</tr>
<tr>
<td>Phoebeis statira (Cramer)</td>
<td>Siproeta stelene L.</td>
</tr>
<tr>
<td>Phoebeis trite (L.)</td>
<td>Tegosa pastazana (Bates)</td>
</tr>
<tr>
<td>SUBFAMILY ANTHOCARINAE (6 species)</td>
<td>Telenossa burchelli (Moulton)</td>
</tr>
<tr>
<td>Itaballia demophile (L.)</td>
<td>SUBFAMILY CHARAXINAE (3 species)</td>
</tr>
<tr>
<td>Itaballia pisonis (L.)</td>
<td>Agrias claudina (Godart)</td>
</tr>
<tr>
<td>Melete lycimnia napona (Fruhstorfer)</td>
<td>Archaeoprepona amphimachus (Fabricius)</td>
</tr>
<tr>
<td>Pyrrhybris lorena (Hewitson)</td>
<td>Memphis morvis (Fabricius)</td>
</tr>
<tr>
<td>Pyrrhybris pyrrha gessara (Fruhstorfer)</td>
<td>SUBFAMILY APATURINAE (3 species)</td>
</tr>
<tr>
<td>Pieritha melita tithoreides (Butler)</td>
<td>Doxocopa agathina (Cramer)</td>
</tr>
<tr>
<td>SUBFAMILY PIERINAE (1 species)</td>
<td>Doxocopa elis (Felder and Felder)</td>
</tr>
<tr>
<td>Ascia signa (Weymer)</td>
<td>Doxocopa pavon (Latreille)</td>
</tr>
<tr>
<td>SUBFAMILY NYMPHALIDAE (125 species)</td>
<td>SUBFAMILY LIBYTHEINAE (1 species)</td>
</tr>
<tr>
<td>SUBFAMILY LIMENITIDINAE (36 species)</td>
<td>Libytheana carinenta (Cramer)</td>
</tr>
<tr>
<td>Adelpha cytherea (L.)</td>
<td>SUBFAMILY HELICONIINAE (5 species)</td>
</tr>
<tr>
<td>Adelpha erota (Hewitson)</td>
<td>Dionis junon (Cramer)</td>
</tr>
<tr>
<td>Adelpha iphiclus (L.)</td>
<td>Dryas iulia (Fabricius)</td>
</tr>
<tr>
<td>Adelpha mesentina (Cramer)</td>
<td>Heliconius erato (L.)</td>
</tr>
<tr>
<td>Asterope markii hewitsoni (Staudinger)</td>
<td>Heliconius wallacei Reakirt</td>
</tr>
<tr>
<td>Callicore astarte (Cramer)</td>
<td>Philaethria dido (L.)</td>
</tr>
<tr>
<td>Callicore cyllene (Dubleday)</td>
<td>SUBFAMILY ITHOMIINAE (26 species)</td>
</tr>
<tr>
<td>Callicore cynosura (Dubleday and Hewitson)</td>
<td>Aeris eurema (Cramer)</td>
</tr>
<tr>
<td>Callicore hesperis (Guérin-Meneville)</td>
<td>Ceratina poecilia Bates</td>
</tr>
<tr>
<td>Catagory kolya (Hewitson)</td>
<td>Forbestra olivencia (Bates)</td>
</tr>
<tr>
<td>Catanophele nemilia (Cramer)</td>
<td>Godyris zavaletta (Hewitson)</td>
</tr>
<tr>
<td>Colubora dirce (L.)</td>
<td>Hypoleryia cyro (Hübner)</td>
</tr>
<tr>
<td>Diaethria clymena (Cramer)</td>
<td>Hypoleryia oriana (Hewitson)</td>
</tr>
<tr>
<td>Dynamine armesia (Fabricius)</td>
<td>Hyposoda anchiala ecuatoriana (Byrk)</td>
</tr>
<tr>
<td>Dynamine chryseis (Bates)</td>
<td>Hyposoda illinisa Hewitson</td>
</tr>
<tr>
<td>Dynamine persis Hewitson</td>
<td>Hyposoda zerepha kena (Hewitson)</td>
</tr>
<tr>
<td>Eunica clythia (Hewitson)</td>
<td>Hypotethys berna (Haensch)</td>
</tr>
<tr>
<td>Eunica eura (Cramer)</td>
<td>Hypotethys euclea (Haensch)</td>
</tr>
<tr>
<td>Eunica mygdonia (Godman)</td>
<td>Hypotethys marmor (Hewitson)</td>
</tr>
<tr>
<td>Eunica sophonisba Cramer</td>
<td>Hypotethys nitona (Hübner)</td>
</tr>
<tr>
<td>Eunica taurine Hübner</td>
<td>Ichthus amariila (Haensch)</td>
</tr>
<tr>
<td>Mechanitis mazaeus (Hewitson)</td>
<td>Mechanitis polymnia (L.)</td>
</tr>
<tr>
<td>Mellinae neophitius Hewitson</td>
<td>Methona grandior (Forbes)</td>
</tr>
</tbody>
</table>
SOUTHERN LEPIDOPTERISTS‘ NEWS

VOLUME 33 NO. 2 (2011), PG. 68

Napeogenes pheranthes Bates
Napeogenes sylphis corea (Hewitson)
Oleria janarilla (Hewitson)?
Oleria ilerida lerida (Kirby)
Oleria sexmaculata (Haensch)
Pteronymia vestilla sparsa Haensch
Pseudoscada aureola (Bates)
Scuda batesi (Haensch)

SUBFAMILY SATYRINAE (36 species)
Bia actorion (L.)
Cepheuptychia cephus (Fabricius)
Cissia confusa (Staudinger)
Cissia hermes (Fabricius)
Cissia myncea (Cramer)
Cissia penelope (Fabricius)
Cissia proba (Weymer)
Cithereius aurora (Felder and Felder)
Cithereius merolina (Zikan)
Coila enyo (Hewitson)
Euptychia arnaea (L.)
Euptychia enyo (Butler)?
Euptychia herse (Cramer)
Euptychia hesionides (Forster)
Euptychia terrestris Butler
Euptychia picea (Butler)
Euptychia tricolor (Hewitson)
Haetera piera (L.)
Meganephtychia helle (Cramer)
Meganephtychia libye (L.)
Meganephtychia modesta (Butler)
Meganephtychia segesta (Weymer)
Pareuptychia hesione (Sulzer)
Pareuptychia interjecta hesionides (Forsters)
Pareuptychia ocellirho (Fabricius)
Pierella astyoche (Erichson)
Pierella lana (Sulzer)
Pierella rhea Fabricius
Splendeuptychia ashna (Hewitson)
Taygetis celsa (Cramer)
Taygetis valentina (Cramer)
Taygetis virgilia (Cramer)
Taygetis xenana (Butler)
Ypthimoides erigone (Butler)
Ypthimoides renata (Cramer)

SUBFAMILY MORPHINAE (3 species)
Morpho adonis (Cramer)
Morpho deidamia Hubner
Morpho hecuba (L.)

SUBFAMILY BRASSOLINAE (3 species)
Caligo idomeneus (L.)
Catoblepia soranus (Westwood)
Opisphanes cassina (Felder and Felder)

FAMILY RIODINIDAE (24 species)
Adelotypa alector Butler
Adelotypa sp. # 2
Amarynthis meneria (Cramer)

Anteros formosus (Cramer)
Calyptra punctata Felder and Felder
Charis autes (Cramer)
Charis cleonius (Stoll)
Charis gynae (Godart)?
Emesis lucinda (Cramer)
Eunogrya satyrus Westwood
Eurybia lamia (Cramer)
Eurybia utaxia (Godman and Salvin)
Euselasia hygenius (Stoll)
Euselasia orfa (Cramer)
Hhomeis mimica (Bates)
Mesosemia cippus (Hewitson)
Mesosemia jucunda Stichel
Mesosemia sirenta Stichel
Mesosemia thymetus (Cramer)
Monethe albertus Felder and Felder
Nymphidium lisimon (Stoll)
Nymphidium medusa Druce
Riodina lysippe (Stichel)
Semonesia macaris (Hewitson)

FAMILY LYCAENIDAE (2 species)
Arawacus aetolus (Cramer)
Timolus echion (L.)

FAMILY HESPERIIDAE (29 species)
Astraptes fulgerator (Walch)
Autochton sp. # 1
Bolla sp. # 2
Cabrius sp. # 1
Carrhenes canescens (Felder)
Cogia calchas (Herrich-Schäffer)
Cycloglypha caeruleonigra Mabille
Cymaenes alunma (Butler)
Ebitetus sp. # 1
Etheus priassus (L.)
Eutocus sp. # 2
Gorgiopus sp. # 1
Gorgythus begga (Prittwitz)
Heliopetes alana (Reakirt)
Heliopetes arsante (L.)
Hylatthyres neles (L.)
Ouleus fridericus (Geyer)
Paches gladiatus (Butler)
Pellia dimidiate Herrich-Schäffer
Phanus sp. # 1
Phocides thermus (Mabille)?
Polythrix octomaculata (Sepp)
Porphyrogenes passalus (Herrich-Schäffer)
Pyrrhoppyge sp. # 1
Pythonides jovianus (Stoll)
Urbanus dorantes (Stoll)
Urbanus simplicus (Stoll)
Urbanus teleus (Hubner)
Xenophanes tryxus (Stoll)

TOTAL SPECIES – 208
TABLE 5. Faunistic similarities (percent of shared species and genera) recorded for rapid surveys of butterflies at four sites in Ecuador.

<table>
<thead>
<tr>
<th>SITE</th>
<th>Papallacta* (No. spp. &amp; genera)</th>
<th>Yanacocha (10, 8)</th>
<th>Tandayapa (27, 23)</th>
<th>Tiputini (208, 125)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Papallacta*</td>
<td>4% , 11%</td>
<td>0% , 22%</td>
<td>0% , 28%</td>
<td>8% , 28%</td>
</tr>
<tr>
<td>Yanacocha</td>
<td>0% , 13%</td>
<td>0% , 0%</td>
<td>0% , 0%</td>
<td>0% , 0%</td>
</tr>
<tr>
<td>Tandayapa</td>
<td>0% , 38%</td>
<td>0% , 0%</td>
<td>0% , 0%</td>
<td>15% , 48%</td>
</tr>
<tr>
<td>Tiputini</td>
<td>1% , 4%</td>
<td>2% , 9%</td>
<td>1% , 0%</td>
<td></td>
</tr>
</tbody>
</table>

*In each case, sites listed in the left column are compared with sites listed at the top of the table.

(Lance Durden, E-Mail: ldurden@georgiasouthern.edu)

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Crypsis - Continued from page 59. Did you find the frog?

The hidden frog (photograph by Lior Golgher).

Mr. Golgher would like to have the members of the SLS who found this task of finding the frog interesting to respond to him at the following e-mail address (FoundFrog@gmail.com) and tell him how long it took you to find the frog. Mr. Golgher studied neuroscience at the Weizmann Institute of Science in Israel and has used this test in the past (How long it takes to find the frog?) in some of his studies. He found that most people find the frog after a few minutes, if they do not lose patience and give up. However, a single subject found the frog within a few seconds and he believes that this is more than anecdotal and thus would be interested in having the readers send him this information.

(Lior Golgher, 8 Ha’asif St., Herzliya 46309, ISRAEL)

[The Southern Lepidopterists’ Society thanks Mr. Lior Golgher for allowing us to use his photographs in the NEWS - The Editor.]

Source: [http://upload.wikimedia.org/wikipedia/commons/9/96/Camouflage_DSC05383 - Frog Highlight JPG](http://upload.wikimedia.org/wikipedia/commons/9/96/Camouflage_DSC05383 - Frog Highlight JPG)
OH DEER ME
(ANOTHER TALE OF DISASTER WHILE LEPPING)
BY
KELLY RICHERS

Some lepping trips are uneventful, and some are so event filled that parts seem to be lost in the memory when they are overshadowed by other parts. Such was a trip in 2009 that I took to the east coast in October.

As a member of the Wedge Entomological Research Foundation, I take a trip every October to Washington, D.C. to the annual meeting of the Foundation at the Smithsonian. Since the meeting is on a Friday, I generally arrive Thursday morning for a day of research at the Smithsonian, (I live in California so I take the overnight flight and arrive at 6 a.m.) then rent a car. This trip I rented a little Hyundai, very “lightweight” if you will, for the weekend. The reason for renting a car is that I drive out on Friday night to the Shenandoah Valley to spend the weekend with my mother and brother who live near Harrisonburg Virginia, where I keep a couple of moth traps (if you can believe I would do such a thing).

So, the research day went well. I took the little car from the hotel in Tysons Corner to the Dunn Loring metro station, and got off the metro at the Smithsonian exit, spent the day with the moths in the collection, and reversed that trip in the evening. The day of the meeting I repeated the trip in to Washington for the meeting.

At the meeting, John Brown invited several of us to dinner. As he lives in an area just southwest of the Dunn Loring exit, it seemed a great fit to head out a few hours late toward the Shenandoah Valley. He printed out instructions from some travel site, and I was all set to drive there after the meeting.

When I got to the Dunn Loring metro station that evening, the first thing I noticed was that none of the streets shown as being next to the station on the map were actually named the same name. Now, unless I had stepped off the subway into a parallel dimension, something was badly wrong. However, I dutifully drove off to the southwest, thinking I would eventually run into the roads on the actual map. Such was not the case, however, and 15 minutes later, I gave up and called. Turns out the map was from some other Dunn Loring. How many can there be? As I headed north again in heavy traffic, moving slowly, in the presumably correct direction, the guy behind me rear ended me, not stopping for some reason in the stop and go traffic.

I pulled off the road into a parking lot so we could trade information, only to see him pause at the entrance, then continue off into the traffic, ignoring me waving and jumping up and down behind him. There were several scratches on the car, and I was not looking forward to returning it, as I had forgone the extra insurance. I was sure it would cost me a hundred or more dollars to return.

However, I made it to dinner, and made it later that night to the Shenandoah Valley. Over the next two days I played 72 holes of golf with my brother, and set traps about five miles outside town Saturday night. Sunday night we had time for me to set traps and collect them Monday morning with one final round of golf before I flew back, if I collected them at dawn.

Monday I drove in the dark to where I had set the traps and picked them up off the power line near where it cut through the forest road. In October, if the weather holds, there are numerous southern moths that make it up the Valley, so those collected are always interesting. I put the traps in the little Hyundai and started off to my brother’s house for the golf outing.

Why those particular five deer decided to cross the road through my car at that particular time shall forever remain a mystery. I was on a rural road with forest on my right and fields on my left. There were numerous other cars on the road, spaced about 50 yards apart in the morning gloaming, and mine was just one of dozens. Did they think “Hey, an aluminum car, let’s go through it!”?

Regardless of the reason, all five deer crossed at the same time. I saw the first one, and swerved left to go behind it, since it was crossing from left to right. That brought me crashing into the second one, who hit my fender with her head hard. Swerving right and braking (I was going all of 45 at the time of the crash) I hit the third one in the
panel in front of the door on the left side, destroying the panel almost completely as the deer must have lunged forward as I went left initially. The fourth deer scooted past untouched. The fifth smashed into the panel behind my door on the left side.

All this happened in about two seconds. I was left with a destroyed car on the driver’s side and the cars behind me braking to a stop. I saw a driveway and coaxed the car to the right into the driveway. Attempting to get out, I discovered that the door was completely jammed, so I did a “Dukes of Hazzard” and hoisted myself out the window.

As I thought, the left side of the car was destroyed. Bits of deer hair hung out of the panel joints, and there was a head imprint in the front left fender—really! The side panel itself was dented in horribly. The door was untouched. The back panel was dented horribly. At a glance I estimated $2000 damage minimum. The car looked like the Keystone Cops had been using it for a day.

Literally ten seconds later a car pulled up from the opposite direction, a driver leaned out and said “Deer hit ya?”

I affirmed his statement, and he pulled in the driveway next to me. Turns out he lived there, and on an average of every three weeks deer hit a car at that spot. He was very nice, and we walked the road together, expecting to find at least one or two dead deer, judging from the dents, somewhere near the road. Nothing. The deer were probably running in the woods laughing their big white tails off.

Somehow I got to my brother’s, and later somehow got the car to the rental place at Dulles. When I pulled into the rental return, the person checking me in just stared. I climbed out the window and calmly stated “This isn’t your ordinary car rental return”.

Eventually it cost me $500 for the deductible on my insurance, and there was one good aspect of it. I forgot completely about the person who rear ended me…! Just another danger of lepping.

(Kelly Richers, E-Mail: KeRichers@wesd.org)

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[Submitted by Vernon A. Brou Jr.]
NEW HOST PLANT RECORDS FOR THE ZABULON SKIPPER
(POANES ZABULON) IN FLORIDA

BY

MARC C. MINNO

The Zabulon Skipper occurs in central and northern Florida, but seems to be most common in the eastern Panhandle, especially from Jackson County eastward into Leon County. This is a common species at Florida Caverns State Park, located just north of Marianna. It is my impression that this skipper has become more abundant in peninsular Florida in recent years. In 2010, I found males perching on leaves in woodlots near my home in Gainesville such as at the University of Florida Natural Area Teaching Laboratory on campus and in the forest adjacent to the Royal Park Shopping Plaza. I spent a lot of time collecting in these areas in the 1980s and 1990s and never saw a Zabulon Skipper during those years. Effie Smith reported finding several Zabulon Skippers at Cedar Key in Levy County in March 2008 [M. C. Minno, 2008. Recent sightings of the Cuban Crescent and Zabulon Skipper in central Florida. Southern Lepidopterists’ News 30(2):84]. Jeff Slotten and I also found Zabulon Skippers at Gulf Hammock in Levy County on May 16, 2010, and at the Lower Suwannee River National Wildlife Refuge in Dixie County on September 17, 2010.

On April 10, 2010, while searching for butterflies at San Felasco Hammock State Park, located northwest of Gainesville in Alachua County, I observed a female Zabulon Skipper ovipositing on Variable Witchgrass (Dichanthelium commutatum) (Fig. 1A). This is one of the most common grasses in Florida. Dichanthelium species are perennial, clumping grasses with a basal rosette of leaves in winter. This female fluttered about 1-foot above the ground and sought out leaves on the flowering stalks of the witchgrasses. I observed her to perch on three different witchgrass plants. On each plant, she bent her abdomen downward (Fig. 1B), quickly laid an egg on the underside of a leaf, then continued searching. After a few minutes, she flew off and was lost from sight. On June 10, I returned to this spot and found a larva of the Zabulon Skipper on Variable Witchgrass (Fig. 1C). The Zabulon Skipper is also frequently associated with another common grass, Longleaf Woodoats (Chasmanthium laxum var. sessiliflorum), in Florida. I have reared adults from larvae collected on this plant at Blue Springs Park in Jackson County.

Our house is located in Gainesville, just east of the Royal Park Shopping Plaza. While playing outside with our grandkids, Mirin (age 5) and Rose (age 2), on May 8, 2010, I noticed a skipper shelter on the leaves of some Indian Woodoats (Chasmanthium latifolium) that I had planted near the street. I pointed the shelter out to the kids and remarked that it was probably just a Clouded Skipper (Lerema accius), which uses a variety of different grasses. You can imagine my surprise when I opened the shelter and found a Zabulon Skipper larva! I have never seen adults of this skipper in my yard, yet there was the caterpillar. I watched this larva over the next few weeks, but it was parasitized by tiny wasps and never completed development.
In summary, the Zabulon Skipper appears to be increasing in abundance in northern Florida. *Dichanthelium commutatum* and *Chasmanthium latifolium* are new larval host records for this butterfly.

![Images of Zabulon Skipper](image)

**Fig. 1.** *Poaues zabulon* and host plant: A) Variable Witchgrass (*Dichanthelium commutatum*) at Eglin Air Force Base in Okaloosa County, Florida, B) a female Zabulon Skipper ovipositing on Variable Witchgrass at San Felasco Hammock State Park, Alachua County, C) Zabulon Skipper larva on *D. commutatum.*

(Marc C. Minno, E-Mail: mminno@bellsouth.net)

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**NEW MOON DATES FOR 2011**

<table>
<thead>
<tr>
<th>July 30</th>
<th>September 27</th>
<th>November 25</th>
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<tr>
<td>August 29</td>
<td>October 26</td>
<td>December 24</td>
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The large and robust notodontid moth *Heterocampa astarte* Doubleday (Fig. 1) has been captured over much of southeastern Louisiana. Adults fly from late March to early October. Based on the multiyear composite phenogram (Fig. 2), *astarte* appears to have four annual broods in southeastern Louisiana; the initial brood peaks mid April, with the second brood peaking near the end of June and subsequent broods peaking at about 36-day intervals. The third brood peaking end of July/early August is the least populated or may represent a minor partial emergence.

Packard (1895) made a most enigmatic statement regarding broods indicative of so many of the early authors of the times "In Texas the moth was collected by Belfrage, April 27 and 29, and July 11, showing that in that state it is double brooded".

Packard (1895) listed specimens from Florida, Georgia and Texas. *H. astarte* was not addressed by Covell (1984). Heppner (2003) listed the range of *astarte* to be the southeast U.S. (South Carolina to Florida and Arkansas to Texas). The parish records in Louisiana are illustrated in Fig. 3.


(Vernon Antoine Brou Jr., 74320 Jack Loyd Road, Abita Springs, Louisiana 70420 USA; E-Mail: vabrou@bellsouth.net)

[Cont. from page 42 - “Gorgone Checkerspots in Georgia”]

Why has this population persisted at Cooper’s Furnace Day Use Area? The answer may lie in the landscape practices used to maintain the powerline easement. According to Curtis Eaton, Georgia Power’s north Georgia forestry specialist, the company has changed its maintenance practices. Formally, it bush-hogged vegetation every six years to keep the rights-of-way cleared, but re-growth was so rapid that saplings often reached heights of 18-20’ before the next mow was scheduled. Under the new practices, the sites are still bush-hogged every six years, but selective spraying also occurs on a two-year cycle between mows. Power company personnel use backpack sprayers filled with non-restricted, selective-use herbicides to hand spray only woody brush. Eaton says that the change has not only been more efficient and economical for the power company, it has also created a more visually appealing landscape that often includes, in his words, “an explosion of wildflowers.” Fortunately it creates a landscape that definitely appeals to Gorgone Checkerspots, artificially maintaining their low-growth habitat that is often naturally sustained only by periodic fires.

Although we have pieced together some of the Gorgone Checkerspots’ life history in the Southeast, the puzzle is far from complete. We still do not know the exact species of the *Helianthus* plants that dot the Cooper’s Furnace hillside. Sunflowers are notoriously difficult to identify, and this one is no exception—a positive ID will have to wait until later in the summer when its flowering structure can be examined and properly keyed. We also wonder about the timing and size of subsequent flights—will a second or even third flight occur, and how large will it be?
Finally, how far does the population extend up the power company’s easement, and how long will Cooper’s Furnace Day Use Area continue to support colonies of Gorgone Checkerspots? Only time and continued observation will tell.

[If anyone has knowledge of a Gorgone Checkerspot population in Alabama, please contact the authors at habitatdesigns@hotmail.com]

A CHECKLIST OF BUTTERFLIES RECORDED AT HARMON DEN WILDLIFE MANAGEMENT AREA, HAYWOOD COUNTY, NORTH CAROLINA, 1976 - 2003

By CHARLES V. COVELL JR.

In 1976 my parents moved from Virginia to Bat Cave, Henderson Co., NC, and later to a retirement home in Hendersonville. During trips from Louisville, KY, to visit them, I began taking the easy turnoff just inside NC from TN on Route I-40 at Harmon Den Wildlife Management Area, Haywood County. A dirt road followed a tumbling mountain stream up to a Max Patch Bald (described in more detail by Marks, 2010). Almost all my records are from the first 3 miles into Harmon Den from the Interstate. Over the years I made lists of butterflies that I had positively identified, and wrote an article about the place for American Butterflies (Covell, 1994). I had included a checklist of 31 species with that manuscript; but the editor deleted it. This list expands my list to 49, as I continued to stop there until late 2003. My Papilio glaucus records certainly include P. appalachiansis (Pavulaan & Wright), which was unknown to me during my visits to Harmon Den. At this time I cannot distinguish one from the other in my records, though later summer sightings were most likely P. glaucus.

The excellent article by Craig Marks has prompted me to present my list here, and note several species that he found that I did not: Celastrina neglectamajor Opler & Krizek, Celastrina nigra (W. Forbes), Glau apexyche lygdamus (Doubleday), and Cylopsis gemma (Hübner). Harry Legrand (2011) made further contributions to our knowledge of Harmon Den butterflies in the “Comments” on p. 17, mentioning Amblyscirtes hegon, and Hesperia sasacus along with valuable field notes. With these additions to my records, we now have 55 species—a fairly extensive list. (I was tempted to add Anthocharis midea (Hübner) as I have a “possible” sighting on April 15, 2001; but since I am not certain I have to leave it off.)

A few general notes might also be useful. There were times when I found Red-spotted Purples and Northern Pearly-eyes very common late in the summer. One time I found many Summer Azures clustered on a horse “plop” in the stream. While I found Diana there in earlier years of my survey, I did not see any in most recent years. I mentioned finding a just-run-over timber rattler in my 1994 article, so beware! My visits were always very brief, and never far from the main dirt road up the “holler,” so there are still promising areas yet to be explored.

In recent years I reported my survey lists to Donna M. Hollingsworth, USDA (Forest Service) in Burnsville, NC, for their records of wildlife in the French Broad District, Pisgah National Forest. Maybe some of those data are available from sources mentioned by Harry Legrand. I have complete field notes for all the visits, and could assist anyone wishing to prepare a more detailed survey publication in the future.

While some specimens were collected, especially in the earlier years, most of the records are definite sightings by me. Names which follow and their arrangement are in accordance with Pelham (2008). Common names follow
Finally, this is a wonderful spot for the lepidopterist, and so easy to access from I-40. I hope you will go there and add to the species list!

**ORDER LEPIDOPTERA**

**Family HESPERIIDAE - Skippers**

- *Epargyreus clarus* (Cramer) - Silver-spotted Skipper
- *Autochton cellus* (Boisduval & Le Conte) - Gold-banded Skipper July 14, 1996
- *Erynnis icelus* (Scudder & Burgess) - Dreamy Duskywing
- *Erynnis brizo* (Boisduval & Le Conte) - Sleepy Duskywing
- *Erynnis juvenalis* (Fabricius) - Juvenal's Duskywing
- *Erynnis baptisiae* (W. Forbes) - Wild Indigo Duskywing

**Family PAPILIONIDAE - Swallowtails**

- *Battus philenor* (Linnaeus) - Pipevine Swallowtail
- *Papilio glaucus* (Linnaeus) - Eastern Tiger Swallowtail
- *Papilio appalachiensis* (Pavulana & Wright, Appalachian Tiger Swallowtail)

**Family PIERIDAE - Whites and Sulphurs**

- *Pyrisitia lisa* (Boisduval & Le Conte) - Little Yellow
- *Abaeis nicippe* (Cramer) - Sleepy Orange
- *Colias philodice* Godart - Common Sulphur
- *Colias eurytheme* Boisduval - Orange Sulphur

**Family LYCAENIDAE - Harvesters, Coppers, Hairstreaks and Blues**

- *Feniseca tarquinius* (Fabricius) - Harvester
- *Calycopis cecrops* (Fabricius) - Red-banded Hairstreak
- *Strymon melinus* Hubner - Gray Hairstreak

**Family NYMPHALIDAE - Brush-footed Butterflies**

- *Libytheana carinenta bachmanii* (Kirtland) - American Snout
- *Danus plexippus* (Linnaeus) - Monarch
- *Limenitis arthemis astyanax* (Fabricius) - Red-spotted Purple
- *Boloria bellona* (Fabricius) - Meadow Fritillary
- *Speyeria diana* (Cramer) - Diana Fritillary
- *Speyeria cybele* (Fabricius) - Great Spangled Fritillary
- *Speyeria aphrodite* (Fabricius) - Aphrodite Fritillary
- *Asterocampa clyton* (Boisduval & Le Conte) - Tawny Emperor
- *Vanessa virginiensis* (Drury) - American Lady

**Literature Cited**


REPORTS OF STATE COORDINATORS

**Alabama:** C. Howard Grisham, 573 Ohatchee Road, Huntsville, AL 35811, E-Mail: chgrisham@Comcast.net

**Arkansas:** Mack Shotts, 514 W. Main Street, Paragould, AR 72450, E-Mail: cshotts@gmco.net

**Florida:** Charles V. Covell Jr., w07 NE 9th Ave, Gainesville, FL 32601, E-Mail: covell@louisville.edu

Charlie sends in the following Florida report for 2011.

Jack V. Shaw’s records from Marmaduke Pond/San Felsasco Hammock Preserve, *vic.* Gainesville, Alachua Co.:


- Silver-spotted Skipper (Silver-spotted Skipper depositing eggs on Bastard Indigo trees)
- Cloudless Sulphur
- Clouded Skipper
- Carolina Satyr
- Viola Satyr
- Palamedes Swallowtail
- Phaon Crescent


- Red Admiral
- Spicebush Swallowtail
- Common Buckeye
- American Snout (Outbreak of American Snout feeding on early blooming viburnum)
- Tropical Checkered-skimmer
- Pipevine Swallowtail


- Red-spotted Purple
- American Snout (Continued outbreak of American Snout; numbers unusually high when compared to previous years.)
- Phaon Crescent
- Palamedes Swallowtail
- Red-banded Hairstreak
- Carolina Satyr
- Variegated Fritillary


- Spicebush Swallowtail
- Lace-winged Roadside-skimmer
- Question mark
- Common Buckeye
- American Lady
- Silver-spotted Skipper
- Red Admiral
- Cloudless Sulphur

4/10/2011 through 4/16/2011

- Common Buckeye
- Cloudless Sulphur
- Palamedes Swallowtail
- American Lady
- Sleepy Orange

**Comments:**

First time observation of Banded Hairstreaks in Marmaduke Pond. This Butterfly was abundant and seen regularly feeding on early blooming Viburnum, Ligustrum, and other masses of white flowers such as Shasta Daisies. Banded HS was most commonly observed butterfly for this week.


- Questionmark
- Red-spotted Purple
- Silver-spotted Skipper
- Zebra Swallowtail
- Banded Hairstreak

- American Lady
- Black Swallowtail
- Pearl Crescent
- Phaon Crescent
| Carolina Satyr | Common Buckeye |
| Dun Skipper | Zebra Swallowtail |

<table>
<thead>
<tr>
<th>4/24/2011 through 4/30/2011</th>
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<tbody>
<tr>
<td>Common Buckeye</td>
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<tr>
<td>Phaon Crescent</td>
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<tr>
<td>American Lady</td>
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<tr>
<td>Palamedes Swallowtail</td>
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<tr>
<td>Horaces Duskywing</td>
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<tr>
<td>Pearl Crescent</td>
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<tr>
<td>Black Swallowtail (both adult and larvae)</td>
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<td>Pipevine Swallowtail</td>
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**Comments:**
Banded Hairstreaks returned with the beginning of blooming of Oakleaf Hydrangia.

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<tr>
<th>5/1/2011 through 5/7/2011</th>
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<tbody>
<tr>
<td>Southern Oak Hairstreak</td>
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<tr>
<td>Banded Hairstreak</td>
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<tr>
<td>Spicebush Swallowtail</td>
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<tr>
<td>Red-banded Hairstreak</td>
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<tr>
<td>Phaon Crescent</td>
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<tr>
<td>Horaces Duskywing</td>
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<tr>
<td>Common Buckeye</td>
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<tr>
<td>Giant Swallowtail</td>
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**Comments:**
All hairstreaks most commonly observed on Oakleaf Hydrangia.
Black Swallowtail larvae on parsley and fennel do not appear to be surviving. We do have an unusual large number of Cardinals, Wrens, and other opportunistic birds in area.

<table>
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<th>5/8/2011 through 5/14/2011</th>
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<tbody>
<tr>
<td>Eastern Tiger Swallowtail</td>
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<tr>
<td>Spicebush Swallowtail</td>
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<tr>
<td>Horaces Duskywing</td>
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<tr>
<td>Southern Oak Hairstreak</td>
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<tr>
<td>Byssus Skipper</td>
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<tr>
<td>Black Swallowtail</td>
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<tr>
<td>Common Buckeye</td>
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<tr>
<td>Gray Hairstreak</td>
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<tr>
<td>Silver-spotted Skipper</td>
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<thead>
<tr>
<th>5/15/2011 through 5/21/2011</th>
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<tbody>
<tr>
<td>Spicebush Swallowtail</td>
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<tr>
<td>Longtail Skipper</td>
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<tr>
<td>Common Buckeye</td>
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<tr>
<td>Red-banded Hairstreak</td>
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<tr>
<td>Horaces Duskywing</td>
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<tr>
<td>Black Swallowtail</td>
</tr>
<tr>
<td>Eastern Tiger Swallowtail (black form female)</td>
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<td>Giant Swallowtail</td>
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<tbody>
<tr>
<td>Gulf Fritillary</td>
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<tr>
<td>Phaon Crescent</td>
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<tr>
<td>Dun Skipper</td>
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<tr>
<td>Horaces Duskywing</td>
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SOUTHERN LEPIDOPTERISTS' NEWS  VOLUME 33 NO. 2 (2011), PG. 80

Zebra Swallowtail  Spicebush Swallowtail
Viola Satyr  Giant Swallowtail
Carolina Satyr  Gray Hairstreak

Comments:
Southern Arrow-wood Viburnum beginning to bloom-out.
Unusual to see no Palamedes Swallowtails this time of year.

Red-spotted Purple  Gulf Fritillary
Giant Swallowtail  Great Purple Hairstreak
Pipevine Swallowtail  Black Swallowtail (Adult and Larvae)
Fiery Skipper  Whirlabout Skipper
Byssus Skipper  Phaon Crescent
Horaces Duskywing

Comments:
Observation of Great Purple HS first of year. This is unusually low abundance compared to past years.
Species counts and individual counts appear to be down from previous years

Gulf fritillary  Broken-dash Skipper (not sure whether southern or northern)
Giant Swallowtail  Red-spotted Purple
Gray Hairstreak  American Lady
Carolina Satyr

Comments:
Species/Individual counts appear to be low compared to previous years. This trend observed on Don Stillwaugh’s butterfly count in Goethe State Forest and Devil’s Hammock. Much smoke in Marmaduke Pond/San Felasco Hammock, Goethe SF, and Devil’s Hammock.

Moth report from Jean Evoy recorded at her Peace River basin property, DeSoto County, 3 miles north of Arcadia:

OECOPHORIDAE:
Eupragia hospita 5/5.

COSSIDAE:
Cosula magnifera 4/27.

MEGALOPYGIDAE:
Lagoa lacyi Apr-Jun.

CRAMBIDAE:
Syncleta obliteralis 3/6; Glaphyria sequistrialis 3/30; Lineodes integra 6/6; Crambus satrapellus 5/7; Microcrambus elegans 3/6; Dolichonia binodulalis 6/6; Clydonopteron sacculana 3/28;

GEOMETRIDAE:
Tornus scolopacinarius 3/91; Epimecis hortianza 3/10; Xanthotype urticaria 3/1; Chlorochlamys chloroleucaria (spring form) 4/5; Idaea hilliata 15/1; Eulithis sp. 4/16; Euphabe meridiana 5/3.

SATURNIIDAE:

SPHINGIDAE:
Lapara conifrtarum 5/20; Darapsa myron 4/3; Xylophanes tersa 5/4.
NOTODONTIDAE:
Datana ministra 6/3; Datana integerrima 5/25

ARCTIINAE:
Utetheisa bella 5/12; Virbia laeta 5/8; Halysidota tessellaris 3/28; Pareuchaetes insulata 5/19.

LYMANTRIIDAE:
Dasyctera tephra 5/13.

NOCTUIDAE:
Ildia americalis 3/7; Bleptina caradrinalis 5/1; Phytometra rhodarialis 3/21; Palpoda pallidior 5/5; Phyllonorycter calitrichoides 5/17; Hypsorpha hormos 5/17; Antiblemma concinnumula 5/23; Panopoda carneicosta 5/6; Panopoda repanda 4/3; Selenis sueruides 5/25; Paraleuca hebraeicum 5/10; Phosphilla miselioedes 5/11; Callopistria floridana 5/15; Conica mobilis 5/5; Azenia obtusa 5/5; Schinia trifascia 5/6; Neadysonia smithii, 3/26.

Records from Gainesville and vicinity, Alachua Co., from Charlie Covell:

Epargyreus clarus, May 28
Urbanus proteus, May 6, June 11
Erynnis horatius, May 10
Pyrgus communis (complex), June 2, 12
Ancyloxypha numitor, June 7
Hylephila phyleus, March 20, April 6, 20, 26, 27, 29, 30, May 10, 18, 20, 29, 30, June 9
Euphyes vestris, April 12
Papilio polyxenes asterius, March 11, April 20, 23, 27, May 13, 17, 18, 20
Papilio glaucus, March 18, April 3
Papilio troilus, March 18, 22, May 8, 22, June 12
Papilio palamedes, March 30, April 8, June 12
Heraclides cresphontes, March 17, 18, April 1, May 7, 10, 15, 18, 22
Phoebis sennae, March 13, 15, 18, 20, 22, 25, 29, April 1, 2, 3, 8, 9, May 7, 10, 20, June 2, 9, 12
Phoebis philea, May 8
Eurema nicippe, March 18, April 1, 23, 27, May 7, 20, June 7, 12, 15
Parhassius m-album, March 27
Calycopis cerrops, March 26, April 2, 28, May 15, 19, 28, June 2
Hemiargus ceraeus, May 19, June 13
Strymon melinus, April 17
Libytheana carinenta, March 26, 27, April 1, 2, 3, 4, 7, 8, 12, 17, 19, 27, May 22
Limniitis archippus, March 25, 26, April 1, May 20, June 7
Limniitis arthemis astyanax, March 31
Vanessa virginiensis, April 8, 17, 23, 27
Vanessa atalanta, March 18, 26, 27, 29, April 1, 2, 9, 20, 22, 23, 26, May 7, 10, 13
Phyciodes tharos, March 18
Phyciodes phaon, May 7
Junonia coenia, March 18, 22, 25, 26, 27, April 1, 2, 3, 4, April 6, 9, 10, 20, 22, 23, 26, 27, 29, May 7, 8, 10, 13, 17, 18, 20, 21, 24, 29, June 9
Agraulis vanillae, April 6, 17, 20, 27, 28, 29, 30, 31, May 7, 8, 15, 17, 21, 22, 24, 28, 29, 30, 31, June 2, 6, 7, 9, 10, 11, 13, 14, 15
Euptoieta claudia, June 12
Asterocampa clinton, April 9
Danais plexippus, March 22, 26, May 10, 13, June 9
Danais silpippus berenice, June 9

March 21 at Payne’s Prairie State Park, Alachua Co., around visitor center, Covell led a group for blacklighting, which yielded the following: Prionoxystus robiniae (Cossidae); Pselnophora belfragei (Pterophoridae); Synanthedon acerni (Sesiidae); Eucosma robinsonana, Ancylis divisana (Tortricidae); Actias luna, Antheraea polyphemus and Automeris io (Saturniidae); Darapsa myron, Darapsa versicolor, and Sphecodina abbotti
(Sphingidae); Cisthene sp., Halysidota tessalaris, Apantesis vittata complex, Spilosoma congrua, Dahana atripennis, Crambidia nr. pallida, Ecpanteria scribonia (Arctiidae); Episamia solitaria, Iridopsis defectoria, Anavitirinella pampinaria, Hypagyrtis unipunctaria, Glenoldes texanaria, Lophosis labeculata, Scoopula compensata, Hethemia pistacearia, Eupithecia miserulata, Eupithecia sp., Orthonama centrostrigaria (Geometridae); Polygrammate hebraecicum, Callopistria cordata, Panopoda repanda, Zale minerea, Zale sp., Acronicta oblinata, Acronicta brumosa, Eudryas unio, Alypia wittfeldii, Elaphra excessa (Noctuidae); Lacosoma chiri dona (Mimallonidae); Tolye velleda (Lasiocampidae); and other species yet undetermined.

Participants included Eric Anderson, Jim Hayden, Bob and Grace Patterson, Herb and Carol Wolf, Jim Vargo, Thomson Paris, Larry Reeves, Roxy Wagner, David and Joanne Auth, and Jim Castner.

Yankeetown, Levy Co., March 17: Poanes aaroni and Copaeodes minima reported by Loran Gibson and Mike McInnis.

At Episcopal Camp Weed, Houston, Suwannee Co., March 19, Covell reported: Hylephila phyleus, Phoebis sennae, Eurema nicippe, Phyciodes tharos, Junonia coenia, and Hermeuptychia sosybius. Also moths including Dryocampa rubicunda (Saturniidae), and Deidamia inscriptum (Sphingidae). Other moth species still to be processed and identified.

Columbia Co., 3 miles West of Lake City on Rt. 90, Covell recorded a Papilio troilus.


St. Petersburg (downtown), Pinellas Co., May 12: Covell saw Phoebis sennae and Ascia monuste.

Ocala, Marion Co., in Appleton Museum parking lot, June 5: Covell recorded a Limenitis arthemis astyanax.

Jeffrey Slotten reports the following (June 12, 2011) from Gainesville, Alachua Co., Newnans Lake: Lethe portlandia, Asterocampa clyton, Asterocampa celtis, Limenitis archippus, Catocala carissima, Catocala piatrix, Catocala maestosa, Catocala sappho, Catocala lachrymosa, Catocala agrippina.

Georgia: James K. Adams, 346 Sunset Drive SE, Calhoun, GA 30701, E-Mail: jadams@em.daltonstate.edu (Please check out the GA leps website at: http://www.daltonstate.edu/galeps/).

The contributors include James Adams (JA or no notation) and Irving Finkelstein (IF). Other contributors are spelled out with the appropriate records. Most records presented here represent new or interesting records (range extensions, unusual dates, uncommon species, county records, etc.), or more complete lists for new locations/new times of year. All dates listed below are 2011 unless otherwise specified.

I-75 exit 169 (Wildwood exit), Dade Co., May 13:
GEOMETRIDAE: Glena plumosaria (COUNTY).
Calhoun, Gordon Co., JKA residence:
GEOMETRIDAE: Hypomecis umbrosaria (very dark), April 24.

Carbondale, I-75 exit 326, Whitfield Co.:
SPHINGIDAE: Smerinthis jamaicensis, April 15. EREBIDAE: Dasychira atrivenosa (female), May 31.

Taylor’s Ridge, 5 mi. W of Villanow, Walker Co.:
April 2, 2011, with Jim Vargo:

April 22, with IF:

Gates Chapel Rd., 8 mi. WNW of Ellijay. Gilmer Co., IF, May 11-13:

Brasstown Bald (just to E of summit), 4200’, Towns Co., JA & IF, May 19-20:

5 mi. ESE of Fairmount, Bartow Co., Salacoa Rd @ Salacoa Creek, June 3-4:
EREBIDAE: Euchaeetes ege. NOCTUIDAE: Protapamea danieli (an excellent place for this moth; cane feeder), Oligia chlorostigma (only place in Georgia where I’ve taken more than one specimen of this species), Abagrotis magnicupida. GEOMETRIDAE: Cepphis decoloraria (one of two places where I have taken multiples of this species), Metarranthis angularia. LIMACODIDAE: Euleela nana.

Atlanta, Fulton Co., IF:
TORTRICIDAE: Epiblema scudderiana, April 20 (COUNTY). NOCTUIDAE: Diastema tigris, June 1
(see record for Atlanta, fewer than 10 records for STATE). No other known records, though should be in the state), Pyrausta aceriana, Diastictis pseudargyralis. COSSIDAE: Prionoxystus robiniae. PTEROPHORIDAE: Leilopitius balanotes.

Statesboro, Bulloch Co., GA, April 20, Lance Durden:
NOCTUIDAE: Morrisonia triangula (COUNTY).
Chickasawhatchee WMA, Mud Creek Road, 0.6 mi S of Hwy. 62, 13 mi SW of Albany, Dougherty Co., JA & IF: April 8-9: MOST records are likely COUNTY records.

**EREBIDAE:** Virbia laeta, Eurythra phasma, Ledaea perditalis, Phytometra rhodaria. **NOCTUIDAE:** Cerma cora, Lacinipolia erecta (STATE). **NOTODONTIDAE:** Heterocampa varia. **GEOMETRIDAE:** Macaria distribuaria, Eusarca fundaria (COUNTY). **CRAMBIDAE:** Pyrausta phoenicealis, Crambus satrapellus. **TORTRICIDAE:** Caroella sartana, Platynota flavedana.

Chickasawhatchee WMA, Seven Bridges Road, 5 mi WSW of intersection with Pine Island rd., 2.5 mi S of Hwy. 62, 18.5 mi SW of Albany, Dougherty Co., JA & IF: April 8-9: MOST records are likely COUNTY records.

**MIMALLONIDAE:** Lacosoma chiridota. **EREBIDAE:** Closobochyla interpuncta, Notigeta formosalis, Celiptera frustulum, Nedysgonia smithii, Zale nr. metatoxides. **NOLIIDAE:** Baileya acadiana (COUNTY). **NOCTUIDAE:** Acronicta connecta (COUNTY), Cerma cora, Comachara cadburyi, Callopistria cordata, Bellura densa, Iodopepla u-album, Morrisonia triangularis (COUNTY), Leucania adjuta, Xanthopastis timais. **NOTODONTIDAE:** Heterocampa astarte, Oligocentria ligma color. **GEOMETRIDAE:** Euchlaena amoena, E. nr. muzaria, E. obtusaria, Lyrosis siuneosa, Taeparia zalisaria, Eubaphe mendica, Nemoria rubriftornaria. **PYRALIDAE:** Diorctia clarioloralis. **URODIDAE:** Urodus parvula. **COSSIDAE:** Prionoxystus robiniae.

Dixon Memorial Forest, swampy area, W of Laura Walker State Park, to south off of 177, April 9-10, Ware Co., JA & IF: SATURNIIDAE: Dryocampa rubicnda. Automeris io (reddish orange males), Antheraea polyphemus, Callosamia secuifera (male and female; unusual, as males don’t usually come to lights). **LASIOCAMPIDAE:** Artae cebiraba, SPHINGIDAE: Isoparce cupressi. **EREBIDAE:** Idia julia, Argyrostris erasa, A. quadrifilaris, Nedysgonia smithii, Pseudanthraca coracias, Zale squamularis, Z. horrida, Phytometra rhodaria. **NOCTUIDAE:** Acronicta longa, A. perblanda, Harrisimemna trisignata, Eudryas unio, Callopistria granitosa, C. cordata. **GEOMETRIDAE:** Iridopsis humaria (COUNTY), Epimecis hortaria (extremely heavily banded), Eutrapela clemataria (yellow), Metarranthis lateritiaria, Euchlaens nr. pectinaria, Lyrosis siuneosa, Taeparia zalisaria, Cleora subluminaria, Iridopsis vellivolata, I. defectoria, Epimesias solitaria, Scopula timandrata (COUNTY, fourth location in STATE), Rheumaptera prunivora (COUNTY). **PYRALIDAE:** Macalla zelleri, Moodna ostrinella. **LIMACODIDAE:** Lithacodes nr. gracea. Heterogenea shutleffii (orange hindwings). **MEGALOPYGIDAE:** Lagoa pyxidifera (UNCOMMON in state, but not new county record). **PTERORPHORIDAE:** Leiloptilus balanotes (Large!).

Dixon Memorial Forest, just to NE of Laura Walker Lake, April 9-10, Ware Co., JA & IF: **EREBIDAE:** Virbia laeta, Apantesis phalerata, Lutoprosopus futillis, Argyrostris quadrifilaris (both lined and unlined), Panopoda repanda, Pseudanthraca coracias. **NOCTUIDAE:** Eudryas unio, Callopistria cordata, Homoeberia apicsosa, Leucania incognita. **NOTODONTIDAE:** Heterocampa varia, Hyparpax perophoroides. **GEOMETRIDAE:** Macaria distribuaria, Nemoria ouina (COUNTY, second location in STATE). **LIMACODIDAE:** Lithacodes nr. gracea.

U.S. 1, 2.5 mi. S of Wavercross, April 9, Ware Co., at lights; JA & IF: **EREBIDAE:** Extigmene acrea. **NOCTUIDAE:** Eudryas unio. **NOTODONTIDAE:** Hyparpax perophoroides. **GEOMETRIDAE:** Macaria varidaria (COUNTY), Epimexcis solitaria. **CRAMBIDAE:** Apogesha stenalis. **CRAMBIDAE:** Epicorsia oedipodalis, Aug. 29, 2002 (COUNTY, STATE?); Chilo demotellus, July 18-22, 2002 & Aug. 29, 2004 (COUNTY, STATE?). **EREBIDAE:** Catocala mira, May 15-20, 2005 (COUNTY).

John Hyatt also sends in the following report for Georgia:

In Macintosh Co., Georgia, in the vicinity of Darien the last week of March, very little was flying despite good weather. Conditions were extremely dry, with many forest fires burning in that section of the state. Rainfall in the coastal strip from Savannah to St. Mary's was about 10-12 inches below norms for the preceding six months. It will be interesting to see if much flies there this summer - little appreciable rain has fallen since that visit.

**Louisiana:** Michael Lockwood, 215 Hialeah Avenue, Houma, LA 70363, E-Mail: mikelock34@hotmail.com
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North Carolina: Steve Hall, North Carolina Natural Heritage Program, Div. of Parks & Recreation, 1615 MSC, Raleigh, NC 27699-1615, E-Mail: Stephen.Hall@ncmail.net

South Carolina: Brian Scholtens, College of Charleston, Charleston, SC 29424, E-Mail: scholtensb@cofc.edu

Tennessee: John Hyatt, 5336 Foxfire Place, Kingsport, TN 37664, E-Mail: jkshyatt@aol.com

John sends in the following report:

Nothing much to report from Tennessee. After a rather hard winter (no unusual low temperature extremes or heavy snow, but it was consistently 5-10 degrees below normal temps for about 6 weeks running), the weather got warm in the last week of February and has stayed that way since. Spring flights of the common species appear to be heavy. On April 12, large numbers of Psychomorpha epimenis were seen in Scott Co., VA, within sight of the TN border.

Texas: Ed Knudson, 8517 Burkhart Road, Houston, TX 77055, E-Mail: eknudson@earthlink.net

Ed sent in the following Texas Zone report on May 28, 2011:

Most of Texas, except the northeast quadrant, has had severe drought conditions all spring with no sign of letting up so far. Wild fires have devastated many areas of the state especially in west Texas and these are continuing in many areas. What a contrast to the weather in the mid south and central plains. Our heart goes out to those affected by the tornados and flooding.

Not unexpectantly, collecting has been very poor in much of Texas. In Houston, where we have had perhaps 1 inch of rain in 2 months, butterfly and moth diversity is way down.

The following localities and dates are abbreviated in the list below:

- MDSP = Martin Dies State Park, Jasper Co., TX, 19-III-11, Bordelon & Knudson
- CLSP = Caddo Lake State park, Harrison Co., TX, 21,22-III-11, Bordelon & Knudson
- TSP = Tyler State Park, Smith Co., TX, 23-III-11, Bordelon & Knudson
- SB = Study Butte, Brewster Co., TX, 11-IV-11, Bordelon & Knudson
- BIBE = Big Bend National Park, Chisos Basin, 12-14- IV-11, Bordelon & Knudson
- CNC = Concan, Uvalde Co., TX, 16-IV-11, Bordelon & Knudson
- NC = New county record

Other data after the species not included above.

**Butterflies:**

**HESPRIDAE:** Erynnis brizo burgessi, E. telemachus, E. tristis tatus (BIBE), E. baptisii (CLSP); Gesta invisiius (CNC); Systasea zampa (BIBE); Hesperia metea licinus, Wise Co., TX, LBJ Grassland, 26-III-11 and Henderson Co., TX, NW of Athens, 31-III-11 James McDermott; Atrytonopsis vierecki, A. python (BIBE); Amblyscirtes hegon (CLSP, TSP, NC), A. alternata (CNC); Agathymus estellae valverdiensis, Terrel Co, TX, 10 miles east of Dryden, 10-IV-11, C. Bordelon, sight.

**PAPILIONIDAE:** Eurytides philolaus, Papilio astylas pallas, Hidalgo Co., TX, Santa Ana NWR, 2-IV-11, Mike Rickard (sightings)

**PIERIDAE:** Anthocharis midea, Spring Valley, Harris Co., TX, 1–III-11, C. Bordelon
LYCAENIDAE: Callophrys henrici turneri, Spring Valley, 26-II-11, C. Bordelon; Callophrys niphon, C. irus hadra (CLSP); Celastrina echo cinerea (BIBE), Cupido comyntas (CLSP, TSP).

Moths:

ERIOCRANIIDAE: Dyseriocrania griseicapitella (CLSP)

GELECHIIDAE: Chionodes lactans (BIBE, NC)

SESIDAE: Zenodoxus mexicanus (BIBE, Terrel Co., TX, 10 m. west of Dryden, 10-IV-11); Zenodoxus palmii (CNC); Synanthes dan acerni (CLSP)

TORTRICIDAE: Phaneta umbrastriana (TSP); Catastega strigatella (BIBE)

THYRIDIDAE: Pseudothyris sephale (CLSP, abundant on flowers)

LIMACODIDAE: Paleophobetron perornata, Medina Co., TX, 5 m. west of Devine, 9,22-IV-11, Maury Heiman (NC). First TX examples seen for 20+ years. A strange and beautiful species.

PYRALIDAE: Meroptera anaimella, Echinocera strigalis, Sosipatra knudsoni (all BIBE); Raganotia dotalis (SB)

GEOMETRIDAE: Macaria quadrinotaria, M. promiscuata (CLSP); Tetracis crocallata (CLSP); Hethemia pistaciaria (MDSP, CLSP, TSP)

URANIIDAE: Urania fulgens, Bastrop Co., TX, Utley, 7-IV-11 sight, NC

LASIOCAMPIDAE: Heterapacha rileyana (CLSP)

EREBIIDAE: Drasteria grandirena (MDSP)

NOLIDAE: Baileya acadiana (CLSP); B. ellessyoo (TSP)

NOCTUIDAE: Charadra moneta (BIBE); Oxycnemis grandimacula (BIBE) Sympistis kappa Becker, Kaufman Co., TX, 9-IV-11, James McDermott; Psaphida electris (TSP); Xystopeplus rufago (TSP); Egira variabilis (BIBE); Hyssia degenerans (BIBE); Xanthopastis timais, Marshall, Harrison Co., TX, 20-IV-11, Bordelon & Knudson); Cerastis tenebrifera (CLSP).

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Ro Wauer also sends in the following report for Texas: Butterflies recorded at Lick Creek Park, Brazos Co., TX, during April & May 2011. The following list was derived from eight visits to Lick Creek Park near College Station. Each trip lasted about three hours, between 9am and 2pm. Dates included April 1, April 5, April 12, April 20, May 4, May 17, May 26, and May 31. All species were photographed for verification. The order of listing and scientific names are derived from Jonathan P. Pelham’s “A Catalogue of the Butterflies of the United States and Canada” (2008).

HESPERIIDAE:
1. Silver-spotted Skipper (Epargyreus clarus): 1 on May 26
2. Southern Cloudywing (Thorybes bathyllus): 1 on April 1
3. Northern Cloudywing (Thorybes pylades): 5 on April 1; 2 on April 5; 2 on May 4
4. Confused Cloudywing (Thorybes confusis): 1 on April 5
5. Juvenile’s Duskywing (Erynnis juenialis): 1 on April 1; 1 on April 12
6. Horace’s Duskywing (Erynnis horatius): 2 on April 1; 1 on April 5; 1 on April 12; 3 on May 4; 2 on May 26; 2 on May 31
7. Funereal Duskywing (Erynnis funeralis): 1 on April 5; 1 on April 12; 1 on May 17; 1 on May 26
8. Common Checkered-Skipper (Pyrgus communis): 2 on April 1; 2 on April 5; 1 on April 20; 5 on May 4; 6 on May 17; 6 on May 26; 2 on May 31
9. Common Roadside-Skipper (Amblyscirtes vialis): 1 on April 1; 1 on April 12; 1 on May 31
10. Celia’s Roadside-Skipper (Amblyscirtes celia): 2 on April 1; 3 on April 5; 4 on April 12; 1 on April 20; 3 on May 31
11. Bell’s Roadside-Skipper (Amblyscirtes belli): 1 on April 1; 2 on May 31
12. Clouded Skipper (Lerema accius): 6 on April 1; 6 on April 5; 2 on April 12; 1 on May 26; 1 on May 31
13. Fiery Skipper (Hylephila phyleus): 1 on April 1; 2 on May 4; 7 on May 26; 2 on May 31
14. Whirlabout (Polites vibex): 1 on May 4
15. Southern Broken-Dash (Wallengreniaotho): 4 on May 26; 14 on May 31
16. Dun Skipper (Euphyes vestris): 4 on April 5; 5 on April 12; 1 on May 17; 2 on May 26; 2 on May 31

PAPILIONIDAE:
19. Pipevine Swallowtail (Battus philenor): 2 on April 1; 2 on April 5; 1 on April 12; 1 on April 20; 2 on May 26
20. Black Swallowtail (Papilio polyxenes): 1 on April 1; 2 on April 5; 3 on April 12; 3 on April 13; 1 on May 4
21. Giant Swallowtail (Papilio cresphontes): 1 on April 5; 1 on April 20; 1 on May 17
22. Eastern Tiger Swallowtail (Papilio glaucus): 2 on April 5; 1 on April 12; 1 on April 20; 1 on May 31

PIERIDAE:
23. Dainty Yellow (Nathalis iole): 2 on April 5
24. Little Yellow (Pyrisitia lisa): 1 on May 17
25. Sleepy Orange (Abaeis nicippe): 1 on May 26
26. Orange Sulphur (Colias eurytheme): 4 on April 1; 4 on April 5; 5 on April 12; 5 on April 20
27. Southern Dogface (Zerene cesonia): 2 on April 1; 2 on April 12; 1 on April 20; 1 on May 31
28. Cloudless Sulphur (Phoebis sennae): 2 on April 1; 1 on April 12; 1 on May 31

LYCAENIDAE:
29. Striped Hairstreak (Satyrium liparops): 1 on May 4
30. Northern Oak Hairstreak (Satyrium favonius ontario): 25+ on April 20; 6 on May 4
31. Henry’s Elfin (Callophrys henrici): 1 on April 1; 2 on April 5
32. Red-banded Hairstreak (Calycopis cecrops): 7 on April 1; 20+ on April 5; 8 on April 12; 3 on April 20; 1 on May 4; 4 on May 17; 1 on May 26; 5 on May 31
33. Dusky-blue Groundstreak (Calycopis isobeon): 2 on April 5; 2 on April 12
34. Gray Hairstreak (Strymon melinus): 1 on April 1; 2 on April 5; 1 on April 12; 1 on April 20; 1 on May 4; 1 on May 26; 2 on May 31
35. Marine Blue (Leptotes marina): 3 on May 26
36. Eastern Tailed-Blue (Cupido comyntas): 3 on April 1; 3 on April 5; 1 on April 20
37. Reakirt’s Blue (Echinargus isola): 30+ on May 26; 1 on May 31

NYMPHALIDAE:
38. Monarch (Danaus plexippus): 6 on April 1; 5 on April 5; 1 on April 20; 1 on May 17; 2 on May 26
39. Gulf Fritillary (Agraulis vanillae): 1 on April 1
40. Variegated Fritillary (Euptoieta claudia): 1 on April 12; 3 on May 4
41. Hackberry Emperor (Asterocampa celtis): 9 on April 12; 4 on April 20; 1 on May 17; 1 on May 26
42. Mourning Cloak (Nymphalis antiopa): 3 on April 20
43. Question Mark (Polygonia interrogationis): 8 on April 12; 1 on April 20; 1 on May 4
44. Common Buckeye (Junonia coenia): 5 on April 1; 4 on April 15; 14 on April 12; 8 on April 20; 2 on May 4; 3 on May 17; 2 on May 26; 2 on May 31
45. Silvery Checkerspot (Chlosyne nyceteris): 100+ on April 1; 200+ on April 5; 50+ on April 12; 10 on May 17; 3 on May 26; 3 on May 31
46. Phaon Crescent (Phycoides phaon): 1 on April 1; 3 on May 4; 10 on May 17; 21 on May 26
47. Pearl Crescent (Phycoides tharos): 20+ on May 4; 8 on May 17; 4 on May 26; 12 on May 31
48. Goatweed Leafwing (Aenea andria): 4 on April 1; 3 on April 5; 2 on April 12; 1 on April 20; 1 on May 26
49. Gemmed Satyr (*Cyllopsis gemma*): 1 on April 1; 5 on April 5; 3 on April 12; 1 on April 20; 1 on May 4; 9 on May 17; 1 on May 31

50. Carolina Satyr (*Hermeuptychia sosybius*): 5 on April 1; 6 on April 5; 2 on April 12; 2 on May 17

51. Little Wood-Satyr (*Megisto cymela*): 10 on April 1; 30+ on April 5; 12 on April 12; 4 on May 17

**Virginia:** Harry Pavulaan, 494 Fillmore Street, Herndon, VA 22070, E-Mail: pavulaan@aol.com

John Hyatt sends in the following report:

An interesting Virginia record - on April 29, Kentuckians Leroy Kohn, Bill Black, and I met atop Big Black Mtn. in Harlan Co., KY (4300'). It was sunny but very cool and windy, not much flying. The interesting sight there was an unusual early flight of buckeye butterflies - almost never seen here before midsummer. We then descended the mountain into Wise Co., VA, and explored a dirt road near the town of Appalachia, where Leroy caught a worn male *Erra laeta* - truly a rare find. Later in the day, at least two more specimens were definitely seen and identified, but not netted. This constituted the first spring sighting of *E. laeta* I'm made in about 20 years. Buckeyes were also flying at this locality.