

Kentucky Lepidopterist

Newsletter of the Society of Kentucky Lepidopterists

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THE SOCIETY
OF
KENTUCKY
LEPIDOPTERISTS

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The Society of Kentucky

Lepidopterists is open to anyone with an interest in the Lepidoptera of the State of Kentucky. Membership dues are annual: \$12.00, and can be sent to the Treasurer: Les Ferge, (see above).



Spring Field Trip

L to R: Ian Segebarth, Kevin Segebarth, Jonathan Smith, Charles Wright, Loran Gibson, Tony Merkle, Bill Black. *Photo by Ian Segebarth.*

Society of Kentucky Lepidopterists Spring Field Trip, 2008

Reported by Loran Gibson

Members Bill Black, Loran Gibson, Tony Merkle, Ian and Kevin Segebarth, Jonathan Smith, and Charles Wright spent the weekend of 25-27 April in the Morehead, KY area enjoying the beauties of spring and the great natural diversity of the northern part of Daniel Boone National Forest. Morehead State University student Toni Evans joined us on Friday afternoon and Saturday morning.

The group spent Friday afternoon along the steep-sided ridgetop known locally as Clack Mountain. A geological characteristic of this area is the presence of a few large sandstone outcroppings that have long resisted erosion. We climbed to the top of the most western member of a group of these outcroppings named Amburgy Rocks. The day was warm, sunny, and breezy. .

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We found that several species of butterflies were "hilltopping" around the highest parts of the rock. Tiger swallowtails (*Peterourus glaucus*) were the most common species, and several at a time could be seen competing for space above a deep crevice in the rock. Other "hilltopping" species included *Battus philenor*, *Pterourus troilus*, *Eurytides marcellus*, *Celastrina ladon*, *Anthocharis midea*, and *Cyllopsis gemma*. Several eight-spotted forester moths (*Alypia octomaculata*) were also "hilltopping" there. At least three pine elfins (*Callophrys niphon*) were alighting in several pitch pine trees that grew on the rocks. Try as we might, we were unsuccessful at collecting any of these as a voucher specimen. They all remained too high up in the pine trees. Other species seen in the area and in other parts of Rowan County on 25 April included: *Epargyreus clarus*, *Erynnis juvenalis*, *E. brizo*, *E. icelus*, *Amblyscirtes vialis*, *Pieris virginiensis*, *P. rapae*, *Colias philodice*, *Callophrys henrici*, *Strymon melinus*, *Everes comyntas*, *Glaucopsyche lygdamus* (in larger than normal numbers), *Polygonia comma*, *Phyciodes tharos*, and *Danaus plexippus*. (A *Vanessa virginiensis* was also seen along Clack Mountain Road on Sunday, 27 April).



Glaucopsyche lygdamus

Photographed by Ian Segebarth on Clack Mountain Road

As Friday wound down, Bill Black and I set out three black light traps on and around Amburgy Rocks. These produced substantial numbers of the usual spring moth species. It was good to see larger numbers of luna moths and polyphemus moths than in recent years.

Hopefully their numbers will continue to increase. Before leaving Clack Mountain on Friday evening, Jonathan Smith showed us the devastation to the prairie remnants along CR 1274. These areas have been visited by lepidopterists and other naturalists for many years and have produced an amazing variety of species. Apparently, a local developer is now installing mobile homes in the area and most of the prairies have been bulldozed! Another wonderful natural area is destroyed out of ignorance and lack of interest!



Former prairie remnant along CR 1274
Rowan County, KY.

On Friday evening the group dined together at a little Italian restaurant in Morehead and then retired to the local Super 8 Motel for the night.

During the night some thunder was heard and a few rain showers fell. Saturday morning brought broken clouds and sun. After collecting our light traps on Clack Mountain weather conditions deteriorated a bit. We moved to another part of the National Forest east of Morehead where we collected larvae, photographed the flora and fauna, and endured another rain shower. In early afternoon weather improved and we drove west into Bath County where we collected and photographed butterflies in the Clear Creek area south of Salt Lick, KY. We began our Bath County field activities near the Forest Service Shooting Range along Clear Creek where there is a
(continued on page 3)

diversity of habitats. As Saturday progressed we continued to move west and north on Forest Roads 909 and 906 stopping intermittently to look at various areas of interest. Eventually we ended up at the point where FR 906 intersects the Sheltoewe Trace Trail. We learned from a nearby trail sign that a natural arch is located approximately one half mile northeast along the trail. We decided to hike up the hill and see this natural wonder. As we made the walk, none of us expected that the object of our efforts would be very exciting. We were mistaken! When we arrived we found a substantial natural arch on a steep, sandstone ridgetop. A bit farther along the trail we found another area of large, interesting sandstone rocks with nice views to the west. Kevin and Ian located a brown elfin (*Callophrys augustus*) among a growth of mountain laurel on the west-facing edge of a cliff. This was a lycaenid that we had hoped to encounter and is the first known record of the species from Bath County. Another good insect was collected by Jonathan Smith along the sandy trail north of the sandstone boulders. There, he captured a northern barrens tiger beetle (*Cicindela patruela*). A bit later I collected another. Charles Wright was happy to have these records for his list of Kentucky Coleoptera.

On the way back into Morehead, Jonathan set out a light trap along FR 909. The group returned to Morehead and dined together at the La Finca Mexican Restaurant.

Butterfly species recorded in Bath County on 26 April included: *Epargyreus clarus*, *Erynnis icelus*, *E. juvenalis*, *Battus philenor*, *Papilio polyxenes asterius*, *Pterourus glaucus*, *P. troilus*, *Eurytides marcellus*, *Colias eurytheme*, *Callophrys augustus*, *Everes comyntas*, *Celastrina ladon*, *Glaucopsyche lygdamus*, *Polygonia comma*, *Vanessa atalanta*, *Phyciodes tharos*, *Cyllopsis gemma*, *Danaus plexippus*.

On Sunday morning, 27 April, the Segebarths departed for western KY and the remaining group met Jonathan Smith at the Clear Creek Shooting Range in Bath County. Jonathan recovered his light trap and found a nice *Feralia comstocki* inside for another new Bath County record. A group of Ornithology students and

their professor from Indiana University of Pennsylvania were visiting the same area and were involved in doing some bird research. We had some interesting conversation with members of that group until they moved on. We stayed in southwestern Bath County along the Forest Service roads there until we departed on Sunday afternoon. Four more butterfly species were recorded on Sunday and added to the Bath County list. These were: *Erynnis brizo*, *Amblyscirtes vialis*, *Anthocharis midea*, and *Vanessa virginiensis*.

We expected to see at least a few individuals of the dusky azure *Celastrina nigra* during the weekend. Larvae of this species were seen on the host plant *Aruncus dioicus* near the Clear Creek Shooting Range in May 2006. Although several areas with the host plant were visited, no adults, eggs, or larvae were found. The absence of this species is troubling and is as yet, unexplained.

(See more Field Trip photos on page 7)

Annual Butterfly Count July 5, 2008

Led by Dr. Charles Covell

The Annual July 4th Butterfly Count at Horner Wildlife Sanctuary in Oldham County, KY, will be held on Saturday, July 5, 2008. We will meet at 9:30 AM at the (now closed) Brownsboro General Store/Restaurant (the only business building) in Brownsboro, one mile east of Exit 14 of Interstate Highway 71. After briefing and assignment to teams, we will count butterflies from 10 AM to 3 PM. If it is a completely rainy day, we will hold the count on Sunday July 6 at the same time.

Please wear boots, long pants, long-sleeved shirts and hats, and bring repellent for ticks and mosquitoes. We will have some nets to loan. You are free to leave whenever you wish.

Beginners and children are encouraged to attend.

Letter from the President

This spring was a very busy one for me. I was invited to give a number of guest lectures scattered across the U.S. and Canada, and between those invitations and several trips to visit family, it felt like I was constantly on the move. Unfortunately, it also cut into my time for fieldwork, so I did not get out as much as I would have preferred in March and April.

I was able to get up to the Upper Green River Biological Preserve (UGRBP) in Hart County in late April, and I found the olympia marble, *Euchloe olympia*. This species is fairly common on the Northern part of the Preserve, but only two specimens have been caught on the South side of the River, on the Kentucky Lepidopterists Spring field trip in April 2004. Both of these were worn and were caught near the riverbank, in old field habitat unlike that where *E. olympia* is typically found. At the time we suspected that these were blown across the river from the large population on the North Side.

On April 21, I was exploring part of an open woodland on a ridgetop on the South side of the Green river in the (UGRBP), when I spotted an array of plants characteristic of *E. olympia* habitat including rockcress (*Arabis* (the larval host plant)), hoary puccoon (*Lithospermum canescens*), and false garlic (*Nothoscordum bivalve*) growing in shallow soil overlying sandstone. I thought to myself, this is just like the habitat for *E. olympia* in Mammoth Cave National Park, when at that moment, an *E. olympia* alighted on a false garlic flower right in front of me. Good to know that the bugs agreed!

In May, I was back in South Texas hunting buckeye butterflies (*Junonia sp.*). It has been dry in Texas this spring, so butterflies in general were not especially abundant, but I was able to find a few and bring them back alive to Kentucky for some ongoing experiments in my laboratory. In June, I went out with my students, Alan Simmons and Joey Marquardt, to visit Bill Black in Paducah. We hoped to

collect some viceroys (*Limenitis archippus*) and red-spotted purples (*L. arthemis astyanax*) for some work we were doing, but in spite of our best efforts, we didn't spot a single one. Hopefully they will be more plentiful later in the year.

In my last letter, I hinted that change was in the wind, and it looks likely that I will be leaving Kentucky over the summer to take a new job. Not all of the i's are dotted yet, so I will hold off making a formal announcement about where I plan to go for now (I will tell you in the next issue of the newsletter, I promise!). However, we do need to plan for the future leadership of our organization, so that when I return to Kentucky for our annual meeting this fall, I will be able to hand over the responsibilities of the Presidency to someone else. It has been a pleasure to spend time with you all and to learn from you. It has been an honor to be able to lead this organization for the last several years, but I will be too far away to do so effectively in my next position. It is an easy and mostly fun job. If you are interested, drop me a note.

Thanks,
Jeff Marcus



Euchloe olympia photographed on the North side of the Green River (UGRBP) by Ian Segebarth on 27 April, 2008.

Degreasing Lepidoptera

By Loran Gibson

Many insect collections have Lepidoptera specimens that appear greasy. Apparently, body fats of some insects break down after death and accumulate as an unsightly, oily deposit on wing and body surfaces. This greasing seems to be especially prevalent among groups with boring larvae that feed in plant roots and stems. In my experience, the giant skippers, many olethreutine moths, and nearly all members of the noctuid genus *Papaipema* are prone to heavy greasing. There are, no doubt, many others. Specimens killed in ethyl acetate seem more likely to become greasy than those killed by other means.

Over the years I have tried several chemicals for degreasing. Immersing specimens in various petroleum distillate products works to dissolve grease, but most of these products have other undesirable characteristics or unwanted side effects. A few chemicals used for degreasing in years past are no longer available. Examples such as benzene and carbon tetrachloride worked well, but are now considered to be carcinogens. Others, including toluol and xylene are still available. I avoid these for degreasing.

I have often used Ronson lighter fluid for degreasing specimens. It works slowly. An average sized *Papaipema* may take a week to become completely grease free immersed in this product! Another frustrating side effect of using lighter fluid is a white crystalline substance that often forms on degreased scale surfaces, especially on the abdomen. This is nearly as unsightly as the grease! I have attributed these crystals to the presence of naphtha in lighter fluid. I have no idea what the chemistry of these crystals actually is. Lighter fluid seems to have little effect on the shape of the spread insect's wings after being soaked in it for relatively long periods of time. This is one of lighter fluid's good characteristics.

Wing distortions are not uncommon when degreasing with petroleum distillates. The degree of volatility of a solvent seems to be directly proportional to the degree of wing distortion it will cause. Ethyl acetate is very volatile. It evaporates extremely fast. I once used it for degreasing a specimen. The grease was removed quickly but as the specimen dried, the wings became so wrinkled that it became mostly worthless.

Acetone is fairly volatile. Generally, it works well for degreasing specimens, but forewing tips may become slightly upturned after immersion. Hind wings sometimes look a bit wrinkled as well. As grease is removed white crystals do not form. This is a big plus.

White gasoline, the same thing as Coleman camping fuel, is virtually the same as lighter fluid. It is difficult to tell from the labels, but white gas may contain less naphtha. Many have had good results degreasing with this product.

I created a controlled degreasing comparison using the following: (1) Ronson lighter fluid, (2) Coleman fuel, (3) Acetone, and (4) a mixture of 50% Coleman fuel and 50% Acetone. For containers, I used four small glass bowls that are slightly deeper than the length of a standard insect pin. Approximately four fluid ounces of each of the products above were placed into the bowls. I used four and one half inch square pieces of standard window glass to cover the bowls and prevent the chemicals from evaporating. Each piece of glass had a piece of 1/8 inch thick cork glued to its center. Specimens for degreasing were pinned to the cork pieces. Glass squares with specimens pinned to the cork were then laid on bowl tops with specimens immersed in chemicals upside-down. I selected four similar sized specimens of *Papaipema cerrussata* for the comparison. All were heavily greased on their abdomens, but none had grease on their wings. I chose this species because specimens commonly become heavily greased. Specimens of this species usually have heavy accumulations of white crystals, especially on abdomens, after being degreased in lighter fluid. (continued page 6)

Specimens were allowed to remain immersed in the four solvents for 24 hours. After a day they were removed and were gently blotted with tissue paper and then blown dry with a glass blowpipe. This helps to fluff up matted scales, especially on the thorax. A small, soft artist's paintbrush was also used to carefully fluff matted scales of wing fringes. After 24 hours, all specimens still had accumulations of grease on abdomens. All were returned to the solvents for another day.

After 48 hours the specimen in the mixture of 50% acetone and 50% Coleman fuel was grease free. After being blown dry, the tips of the forewings were slightly up-turned. No noticeable wrinkling was observed on wing surfaces. There were no white crystals on scale surface. The specimen in 100% acetone still had a little grease on the abdomen after drying. There was also some slight wrinkling on the hind wings and the forewing tips were up-turned a bit. No white crystals were present on this specimen. The specimen in 100% Coleman fuel (white gas) still had a substantial accumulation of grease on the abdomen as well as a patch or two of white crystals. Wing surfaces were not at all distorted. The specimen from Ronson lighter fluid was essentially in the same condition as the one from white gas. Some grease remained, white crystals had formed on the abdomen, but wings were undistorted.

After the two-day test, specimens which still had grease or white crystals were immersed into baths of 50% Acetone and 50% Coleman fuel for another 24 hours. The next day all specimens were grease free. Those with some previous wing distortions still had them. Those with white crystals from a previous bath had lost most of those.

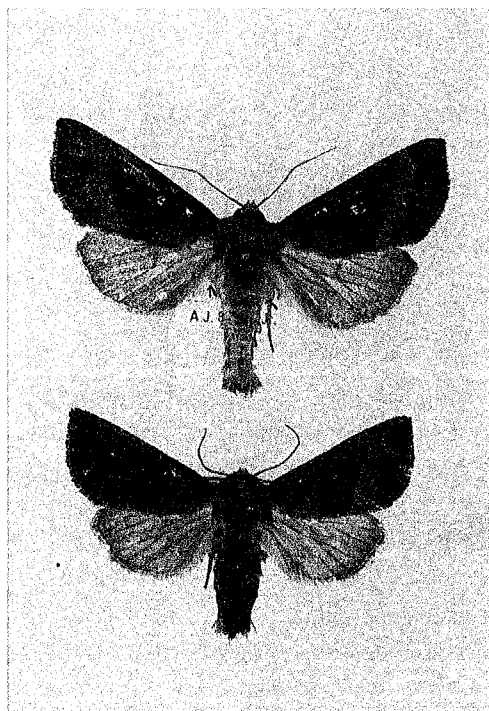
After this comparison, I degreased a couple of dozen *Papaipema* specimens in a mixture of approximately 30% Acetone and 70% Coleman fuel. This mixture provided excellent results. The average time in which specimens became grease free was approximately two days. After the initial 48-hour period I left a few immersed for a bit more treatment. I prefer having my

specimens as grease free as possible. Overall, this group of *Papaipema*, were free of grease and also free of white crystals. Most wing surfaces were unaffected by the process, a few had slightly upturned forewing tips. All looked much better than before!

For degreasing, it appears that a mixture of acetone and white gas is superior to either of those two chemicals alone. White gas seems to reduce wing distortions caused by acetone alone. Acetone apparently dissolves the unsightly white crystals caused by immersion in lighter fluid or white gas alone. The mixture also seems to work as fast if not faster than acetone alone. It certainly works faster than either white gas or lighter fluid. I highly recommend degreasing as a way to improve your collection of *Papaipema* or other greasy specimens. You will be amazed by the change.

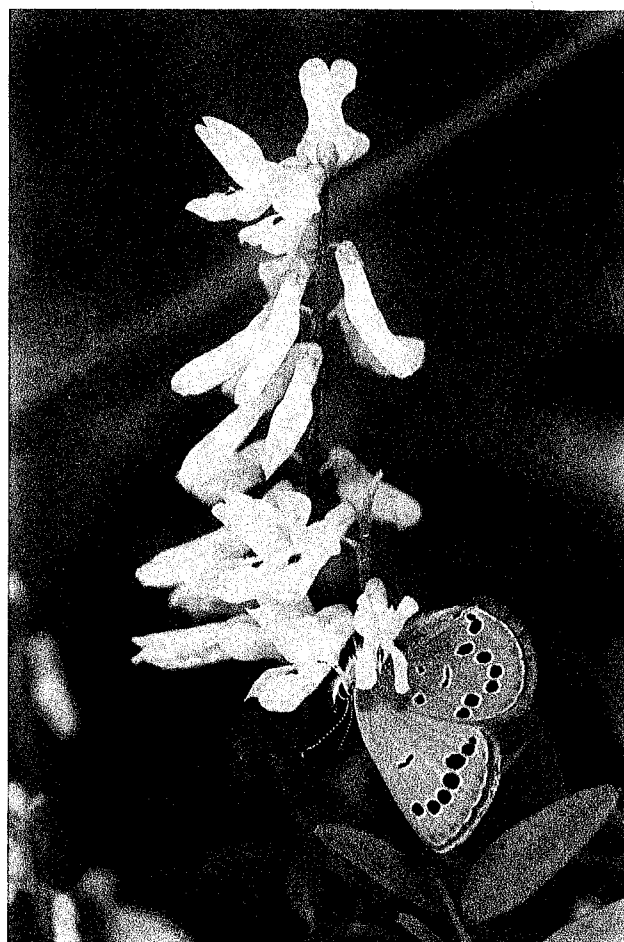
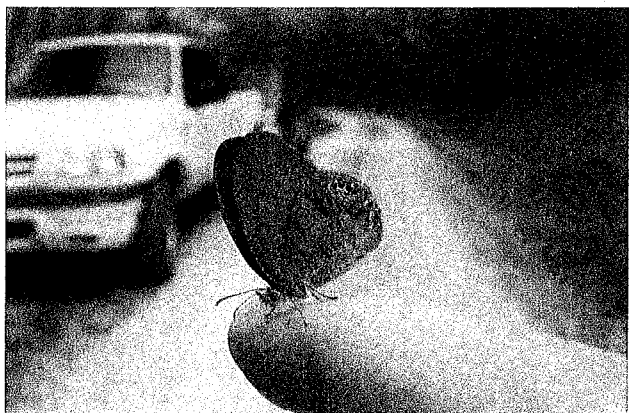
New State Record

Paipapema silphii



Collected by Jonathan Smith, Oct. 2 & 14, 2007,
Rowan County, in a black-light trap.

Photo by Ian Segebarth



More Field Trip Photos

Clockwise from bottom left

Tulip Tree Beauty on pine bark (by Loran Gibson)

On trail up to Amburgy Rocks (by Loran Gibson)

Cyllopsis gema on Jonathan's finger (by Loran Gibson)

Natural arch on Sheltoewe Trace (by Loran Gibson)

G. lygdamus on Carolina Vetch (by Ian Segebarth)

Eight-Spotted Forester (by Ian Segebarth)

Editor's note: I regret that the newsletter was not completed in time to fully accommodate the following, but it has been included because there are yet a few remaining dates, and because it is good for us to know what Charles and Mary have been up to this summer.

Buggy Kentucky

Charles Wright and Mary Hamilton are presenting a program on insects at Kentucky public libraries during the months of June and July. The summer reading program theme for 2008 is "Catch the Reading Bug". To tie into this theme Charles and Mary have prepared an approximately one hour program on Kentucky insects aimed at an audience of 6 to 10 year olds, though the program is open to any age, including adults. Mary will present insect related stories while both Mary and Charles will show insect photos and tell a little about each insect. Specimens of the insects shown on the photos will also be available to view so that the audience can get an idea of their true size. Though most of the insects talked about will be beetles there will be a few Lepidoptera shown.

The following is list of dates and libraries. Some of the programs are being held at places other than the library since not all the libraries have meeting rooms or rooms large enough for the program, so please contact the library for time and place.

June 10, William B. Harlan Memorial Library, Tompkinsville, KY. 270-487-5301.

June 12, Bath County Memorial Library, Owingsville, KY. 606-674-2531.

June 12, Fleming County Public Library, Flemingsburg, KY. 606-845-7851.

June 12, Rowan County Public Library, Morehead, KY. 606-784-7137.

June 13, Green County Public Library, Greensburg, KY. 270-932-7081.

June 13, Adair County Public Library, Columbia, KY. 270-384-2472.

June 16 & 17, McCracken County Public Library, Paducah, KY. 270-442-2510, Ext. 22.

June 19, Scott County Public Library, Georgetown, KY. 502-963-3566.

June 20, Pulaski County Public Libraries, 3 locations - Main, Shopville Branch and Nancy Branch, Somerset area, KY. 606-679-8401.

June 25, Wolfe County Public Library, Campton, KY. 606-668-6571.

June 26, Larue County Public Library, Hodgenville, KY. 270-358-3851.

July 2, Marshall County Public Library, Benton, KY. 270-527-9969, Ext. 26.

July 8, Estill County Public Library, Irvine, KY. 606-723-3030.

July 19, Boone County Public Libraries - Walton Branch, Walton, KY and Scheben Branch, Union, KY. 859-342-BOOK, Ext. 8142.

July 23, Trimble County Public Library, Bedford, KY. 502-255-7362.

July 24, Paris - Bourbon County Public Library, Paris, KY. 859-987-4419.