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Nemoria unitaria, Edmonton Alberta July 5, 2007. Photo: Gary Anweiler.

<u>Conservation Matters:</u> <u>Contributions from the Conservation Committee</u>

The Butterfly Conservation Initiative Developing a New Conservation Vision through Compound Eyes

Stephanie J. Sanchez, Program Coordinator, Butterfly Conservation Initiative

and

Jaret C. Daniels, Ph.D., IFAS Assistant Professor and BFCI Steering Committee Co-Chair

University of Florida

The popularity of butterflies continues to grow tremendously on a nationwide level. Unfortunately, the number of imperiled species has also mirrored this upward trend. Many state and federal agencies struggle simply to meet the demanding funding requirements necessary to support the recovery of the current federally listed U.S. butterflies. Lack of public awareness, agency inexperience with invertebrates, and a focus on larger taxa have compounded the problems of population decline and generally resulted in minimal recovery actions.

At present, 22 butterflies (including skippers) are federally listed under the U.S. Endangered Species Act (http:// ecos.fws.gov/tess public/ SpeciesReport.do?groups=I&listingType= <u>L&mapstatus=1</u>), 15 by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) (http://www.cos ewic.gc.ca/eng/sct0/rpt/rpt csar e.pdf) and many more by individual U.S. states. Of the federally listed butterflies, only 15 have final and approved recovery plans; no recovery plans are complete for the Canadian species. Fewer still have received comprehensive research attention to address key information gaps (habitat characteristics, life history, behavior, population dynamics, etc.) necessary for effective recovery and management.

The **Butterfly Conservation Initiative (BFCI)** was established in

2001 as a result of conversations between the Association of Zoos and Aquariums (AZA) and U.S. Fish and Wildlife Service's Office of Partnerships and Outreach. At that time, it was recognized that many AZA zoos and aquariums, particularly smaller facilities, were actively seeking opportunities to contribute to North American conservation efforts. By demonstrating a commitment to local wildlife, these institutions could position themselves as community conservation leaders. Butterfly conservation and recovery offers a unique opportunity for zoos and aquariums of all sizes to participate in field conservation in a meaningful way. Hands-on efforts, including habitat restoration and creation, native plant propagation, captive rearing, education and outreach. and population monitoring, offer participants a chance to connect directly with species and habitats in need while helping to inform their visitor base.

BFCI is a national coalition of 43 accredited zoos and aquariums and seven partner organizations: the Association of Zoos and Aquariums, U.S. Fish and Wildlife Service, National Wildlife Federation, Environmental Defense, McGuire Center for Lepidoptera and Biodiversity, Xerces Society and the North American Pollinator Protection Campaign. Together, BFCI is dedicated to the

conservation of threatened, endangered, and vulnerable North American butterflies and the habitats that sustain them, with a focus on recovery, research, and education. BFCI strives to empower its members and partners to work individually and collaboratively to affect butterfly conservation and offer opportunities for engagement suitable to diverse interests and strengths.

Operating out of the offices of its original host institution, the Association of Zoos and Aquariums, under the visionary leadership of Ruth Allard and Shelly Grow, BFCI began to benefit butterfly recovery efforts through the utilization of the many resources available from its partner organizations and the participating accredited zoos and aquariums. Staff entomologists, husbandry experts, horticulturalists, education specialists, and volunteers are working together to share their expertise, skills and resources.

BFCI member projects are diverse and reflect the interests, skills, and resources of each institution. Members are involved in both small- and largescale habitat restoration ranging in scope from on-site educational butterfly and pollinator gardens and the National Wildlife Federation (NWF)certified Backyard Habitat Program, to propagating host plants for restoration *Continued on pp. 77*









Butterfly Conservation Initiative in Action

Fig. 1. Woodland Park Zoo and Nature Conservancy staff release Oregon silverspot from eclosion cages with the help of students from Lewis and Clark College. Cascade Head, Oregon. Photo: Celine Pardo. Fig. 2. Stephanie Sanchez (BFCI Coordinator and UF resaerchers) works on the captive propagation of the endagered Miami blue butterfly at the McGuire Center for Lepidoptera and Biodiversity, Florida Museum of Natural History. Fig. 3. Oregon Silverspot (Speyeria zerene hippolyta). Photo: Woodland Park Zoo. Fig. 4. Male Miami Blue (Cyclargus thomasi bethunebakeri). Photo: Jaret Daniels. Fig. 5. Dr. Akers Pence conducts training for the Florida Butterfly Monitoring Network (FBMN) at Camp Bayou Outdoor Learning Center, Ruskin, FL. FBMN is a collaborative citizen science program between BFCI, University of Florida and eight Florida AZA institutions that pairs zoo staff members, university researchers and public volunteers to survey butterfly populations. Photo: D. Cummings. Fig. 6. Karner Blue workshop participants in the field.



Butterfly Conservation Initiative Continued from pp. 75

sites and collaboratively working on multi-acre landscape restoration projects. Member institutions are involved in the captive rearing, reintroduction, and related habitat assessments of multiple butterfly species, most of which are listed as either threatened or endangered. Many have ongoing butterfly education projects that include exhibits, on-site programs, and butterfly festivals. Some are working with state wildlife agencies to engage landowners in species or habitat conservation. Still others are participating in citizen-science butterfly monitoring networks that generate valuable distribution data for researchers and land managers while connecting children and adults with local wildlife.

Specific *in-situ* and *ex-situ* research among BFCI members is extensive. Ongoing conservation and recovery programs focus on many organisms and sites: Karner blue, Plebejus

Zoo, Detroit Zoo, Roger Williams Park Zoo, Toronto Zoo), Mitchell's satyr Neonympha mitchellii mitchellii, (Toledo Zoo), Oregon silverspot, Speyeria zerene hippolyta (Woodland Park Zoo, Oregon Zoo), Taylor's checkerspot, Euphydryas editha taylori (Oregon Zoo, Xerces Society), Miami blue, Cyclargus thomasi bethunebakeri (McGuire Center for Lepidoptera and Biodiversity/University of Florida), Baltimore checkerspot, Euphydryas phaeton (Marvland Zoo in Baltimore). purplish copper, Lycaena helloides (Toledo Zoo), swamp metalmark, Calephelis muticum (Peggy Notebaert Nature Museum/Chicago Academy of Sciences, Toledo Zoo), Schaus' swallowtail, Papilio aristodemus ponceanus (McGuire Center for Lepidoptera and Biodiversity/ University of Florida), mardon skipper, Polites mardon (Oregon Zoo, Xerces Society), large-scale habitat restoration (Akron Zoo, Cincinnati Zoo, Cleveland Metroparks Zoo, Columbus Zoo, the Wilds, Toledo Zoo), and many more.

[Lycaeides] melissa samuelis (Toledo In May of this year, BFCI moved from the Association of Zoos and Aquariums, to its new host institution, the University of Florida's McGuire Center for Lepidoptera and Biodiversity at the Florida Museum of Natural History in Gainesville. The McGuire Center includes some 50,000-square-feet of collection, office and exhibit space and houses one of the largest and most comprehensive collections of Lepidoptera in the world. BFCI hopes to continue its growth at the McGuire Center by involving natural history museums, botanical gardens and other conservation organizations in its membership and its many collaborative endeavors.

> For additional information on the Butterfly Conservation Initiative, please visit our soon to be revised website at www.butterflyrecovery.org or contact Stephanie Sanchez (BFCI Program *Coordinator*) atssanchez@flmnh.ufl.edu.

Nominations for the Karl Jordan Medal

Jacqueline Y. Miller

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This is a call for nominations for the Karl Jordan Medal Award. Established in 1973, the award was named for Dr. Karl Jordan, the Curator of the Lepidoptera Collections at Tring Museum, and who was one of the original Honorary Life Members of the Lepidopidopterists' Society. Among the 20th Century lepidopterists, Dr. Jordan was one of the pre-eminent entomologists in the field and began his career as a coleopterist but later one of the world's leading authority on Siphonoptera.

The Karl Jordan Medal is given biannually by the Lepidopterist Society in recognition of outstanding original research on the Lepidoptera, not a compilation of already known facts. The publications should have an emphasis on the fields of morphology, taxonomy, biogeography, and what was originally known as "natural history." The award may be based on a single piece of research or on a series of interrelated works. These publications must have been published at least three years prior to the nomination but not be more than 25 years old. In addition, the Jordan Medal is not intended to be a career award as the Society already has such award, the Honorary Life an

Membership, but it does not preclude the award being presented to an Honorary Life Member.

Please send nominations along with a list of the publications for consideration to Dr. Jacqueline Y. Miller at the above address or to jmiller@flmnh.ufl.edu on or before 1 January 2008.

Presidential Profile

John Acorn

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Hello fellow lepidopterists. It is traditional for the incoming president of the Lepidopterists' Society to introduce him or her self in the News, and I'd hate to begin my presidency by ignoring tradition. So here I am, proud to be able to serve such a fine group of people with such a fascinating shared purpose.

You've heard this from dozens of other people, but my own passion for the Lepidoptera began when I was very young. When my dad read "The How and Why Wonder Book of Insects" to me, I was delighted to discover insect collecting, and began with a dead bumblebee from the back window of our '49 Pontiac (in 1964—I'm not as old as that car). Bees soon gave way to butterflies, and I still have my original collection, which consists only of wings, ironed between two layers of wax paper and mounted in a picture frame.

I still collect insects, and I find collections especially helpful when preparing insect field guides. I have now published sixteen books, two of

which deal entirely with butterflies. My first butterfly guide, for Alberta, was illustrated primarily with my own photographs, and was intended for butterfly watchers. My most recent butterfly guide, "Butterflies of British Columbia," features the detailed paintings of my good friend Ian Sheldon, and the text is a sincere attempt to show the complementary values of collecting, vouchering, systematics, taxonomy, observation, photography, and conservation. Let me assure you I am not one of those who take an "out with the old and in with the new" attitude.

During the late 1990s I was also involved in television, and hosted two nature series: "Acorn The Nature Nut" and "Twits and Pishers" (a birding show). As a consequence, I have been invited to speak at various events across North America. During these trips, I have met many members of the Lepidopterists' Society, and I have also used these trips to keep a finger on the pulse of nature study in the US and

Canada. I hope that this perspective will serve me well as your president.

These days, I teach at the University of Alberta, in the Department of Renewable Resources, and I am still actively involved in writing books. My current projects are both lepidopterological—a field guide to the butterflies of Ontario and Eastern Canada, and a guide to the "big snazzy moths" (sphingids, saturniids, and Catocala) of my home province of Alberta. The same passion for butterflies and moths still motivates me, and I still get the same joy from hanging out with others who share this rare obsession.

So that's a glimpse at who I am. More importantly, I spend much of my time (and I think this goes for the rest of your executive council as well) wondering who you are, since we sincerely want our society to serve all its members well. So if you have thoughts or opinions, suggestions or criticisms, I promise that I'm "all ears!" I look forward to getting to know you.

The Presidency of the Lepidopterists' Society

Bill Conner, Past President of the Lepidopterists' Society

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Over the past several years, presidents of the Lepidopterists' Society have expressed frustration at their inability to accomplish everything they want to do. It seems that by the time they learn the ropes as president, it is time to pass the torch to a new "rookie". The Executive Council discussed the situation at the Bakersfield meeting and realized that our constitution provides a ready fix to the problem: any president can run for a second term. The Council agreed that this should be

the norm rather than the exception, and our current president, John Acorn, volunteered to stand as a test case. His name will appear on the ballot again this year, and it is the expectation that all future presidents will do the same barring unforeseen circumstances that require them to bow out of the election.

Please note that the Nominating Committee will always do its best to have choices on the ballot so that a president who does not meet the

expectations of the Society's members can be replaced. The Executive Committee believes that two-term presidents will be more effective and will help our Society respond to changing times and future needs. As always, the Council welcomes your input on the matter.



A Remarkable Genitalic Gynandromorph of Acleris celiana (Robinson) (Lepidoptera: Tortricidae:Tortricini) from Texas

Elaine Hodges (deceased)¹ and John W. Brown²,

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a typical male and female. Terminology

for genitalia structures follows Klots

Based on specimens in collections, gynandromorphs (part female, gyn-, and part male, andro-) apparently are exceedingly rare in nature. They are truly striking when they occur in sexually dimorphic Lepidoptera and exhibit external bilateral asymmetry with one pair of wings showing the male pattern and the other pair the female. Many examples have been illustrated in the literature (e.g., Hessel 1964, Manley 1971, Scriber & Evans 1988, Kutis and Heppner 1990, Bridgehouse 2000, Winokur 2002, Crolla 2004, Warren 2006). Gynandromorphs typically develop a sexual abnormality early in their development, resulting in bilateral differentiation. This condition may be caused by a loss of a Z chromosome in the first cell division of the fertilized egg or in a binucleate ovum (Blanchard and Descomon 1988). Although considerably less conspicuous when gynandromorphy is manifested in the internal anatomy, these individuals are no more common and no less remarkable. The purpose of this note is to illustrate the genitalia of a gynandromorph of Acleris celiana (Robinson) (Tortricidae) from Texas and compare them with the genitalia of a typical male and female of the same species.

Dissection methodology followed that presented by Clarke (1941); all specimens were dissected by the late Jack F. G. Clarke. The illustrations were rendered by the late Elaine Hodges, from specimens suspended in glycerine. In order to interpret the deformed and/or displaced parts, the texture, shape, and relative location of structures were compared with those of

are (1970). are The gynandromorph was collected at in Tennessee Colony, Engeling WMA,

Anderson Co., Texas, on 7 October 1983, by E. C. Knudson (USNM slide number 26293). Superficially, it is indistinguishable from females of this species. The two typical specimens used for comparison also were collected by Knudson in Texas (USNM slide numbers 26292 and 26294, male and female respectively). All three specimens are deposited in the collection of the National Museum of Natural History, Smithsonian Institution, Washington, DC.

In the genitalia of the gynandromorph (Figs. 1, 5) virtually all of the male parts are present, whereas most of the female parts are discernible. In the male portion, the tegumen, socii, transtilla, valvae, juxta, and aedeagus all appear to be fairly typical. The two densely setose dorso-lateral pads are interpreted as the socii, and the feature identified as "subscaphium" (Figs. 1, 5) appears to represent the gnathos-subscaphium complex typical of Tortricini. The most conspicuous deviation from the typical male genitalia (Figs. 3, 4) is the presence of papillae anales (ovipositor lobes) dorso-laterally from the tegumen. Also, the rudimentary uncus is displaced slightly to the right. Otherwise, the male genitalia are little modified and easily recognized.

In contrast, the female portion of the genitalia are incomplete and moderately modified (compare Figs. 1 and 2). The

sterigma is virtually absent, and the papillae anales are situated dorsolaterally on the tegumen of the male portion, with one well developed and the other greatly reduced (Fig. 5). The only structure that may represent the apophyses is the feature shown in Fig. 9, immediately to the left of the number. The ostium bursae joins the male genitalia at the middle of the vinculum (Fig. 1). The ductus bursae and corpus bursae are nearly complete and normal, but the signum is much reduced (Fig. 1). The lateral lobes of the sterigma (sternum VIII), characteristic of most species of Acleris, possibly are represented by the structures labeled as such in Fig. 1 and as "lateral lobe?" in Fig. 6, still attached to the integument of the preparation.

The integument or pelt (Figs. 6, 8, 9), likewise, is highly modified. Below the mesal lobe of sternum VIII in the gynandromorph there are sclerotizations typical of the male of this species, but their shapes are abnormal. For example, Fig. 7 shows the narrow hourglass-shaped sclerotized patch of the typical male tergum VIII; the distorted sclerotized patch in the gynandromorph is show in Fig. 8. Also, Fig. 10 shows the sclerotized patch of the typical male sternum VIII; the distorted patch in the gynandromorph is shown in Fig. 6 ("sternum VIII").

I have dissected over 5,000 specimens of Tortricidae and examined more than 15,000 additional genitalic dissections, and I have seen male and female parts in the same specimen only 2 or 3 times.

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Abnormal growth of *Papilio multicaudatus* (Two-tailed Swallowtail) caterpillars

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The swallowtail butterfly Papilio *multicaudatus* (Fig. 1) is widespread in North America, ranging from much of the western half of the United States to Guatemala (Tyler et al. 1994). Austin, Texas, forms the easternmost range of the species in the United States (Scott 1986) and here the species occurs sympatrically with P. glaucus, the eastern tiger swallowtail. Although the species is polyphagous in larval stages on Rosaceae, Oleaceae and Rutaceae over its range (Scott 1986), around Austin it seems to prefer Ptelea trifoliata, the wafer ash or hop tree (Rutaceae; Dan Hardy and Kunte, unpublished observations). Similar to many other Papilio, the early instar caterpillars of P. multicaudatus are dark brown marked with a white blotch, with a general resemblance to a bird-dropping (Fig. 2). In later instars they turn green with prominent thoracic bands and spots (Fig. 3 and 4).

In April 2006 I reared a dozen caterpillars of *P. multicaudatus* collected from the Barton Creek Greenbelt. I fed the caterpillars *Ptelea* twigs that were placed in a camera film container filled with water to keep the twigs fresh, and all this was covered with a large dome-shaped plastic bowl to retain moisture. Two second-instar caterpillars wandered off from this setup and starved for two days before I discovered them and put them back on their host plant, isolating them from other caterpillars to observe them closely.

The two-day starvation had a profound effect on the development and color pattern formation of these caterpillars. One caterpillar was slow to resume feeding, fed intermittently and molted once after four days. After its molt it

was still dark brown with the white patch on the back that is characteristic of early instars. Remarkably, it had large, albeit somewhat obscure, thoracic spots similar to the late instar caterpillars (Fig. 5). The caterpillar retained this exceptionally unusual color pattern until its death several days after the molt.

The second caterpillar molted within a day of resuming feeding. After the molt it turned dirty moss-green-brown, the thoracic markings well-developed but the white patch on the back still prominent (Fig. 6). Its coloration was intermediate between the early and late instar caterpillars. This instar was unusually prolonged, lasting for ~ 10 days, during which it grew to an almost normal size for that instar. It did not skip an instar before pupation, as do some caterpillars that face food shortage. It pupated a few days before the other caterpillars of its age collected from the same plant on the same day. It metamorphosed into a male butterfly, which was marginally smaller than the average males in Austin area but otherwise it seemed healthy.

The abnormal growth of the second caterpillar was peculiar. After starvation, it seemed that it tried to molt quickly, apparently in an effort to finish the larval stages early. Then, given the abundance of the host plant, it prolonged the next instar to catch up on its growth to reach the size that was near-normal for the instar. Tt. demonstrated the remarkable ability of butterfly caterpillars to adjust their growth rate to the availability of food. More than the abnormalities in size that are evident in Fig. 5 and 6, the changes and anomalies in larval coloration were more intriguing.

Changes in expression levels of several melanin-producing genes are crucial in the dramatic switch in coloration between the early and late instar P. xuthus caterpillars (Futahashi and Fujiwara 2005). Similar gene action is presumably important in the development-related color changes in P. multicaudatus caterpillars. It would be interesting to study gene expression and its disruptions in the formation of anomalous color patterns similar to the ones reported in this note for P. multicaudatus.

Acknowledgment

I thank Dan Hardy for showing me the Barton Creek area and for his comments on an earlier draft.

Literature Cited

- Futahashi, R., and H. Fujiwara. 2005. Melaninsynthesis enzymes coregulate stage-specific larval cuticular markings in the swallowtail butterfly, Papilio xuthus. Development Genes and Evolution 215:519-529.
- Scott, J. A. 1986. The Butterflies of North America: A Natural History and Field Guide. Stanford University Press, Stanford, USA.
- Tyler, H., J. K S Brown, and K. Wilson. 1994. Swallowtail Butterflies of the Americas. Scientific Publishers, Gainesville (USA).



Speyeria idalia in Georgia: An Erroneous Historical Record

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Based on an old watercolor drawing that he found in the British Museum. Scudder (1888-1889) included "the elevated parts of Georgia" within the range of the Regal Fritillary, Speyeria idalia (Drury). This drawing is among 17 volumes of watercolors by the Georgia naturalist John Abbot (1751ca. 1840) that are now preserved in The Natural History Museum, London. They were once owned by John Francillon (1744-1816), who sold Abbot's specimens and drawings to patrons in Europe. The drawing of S. idalia depicts the dorsal and ventral aspects of an adult male and includes a handwritten note that reads, "Met with by Mr Elliot in his Journey to the Mountains." Often mistaken for Abbot's handwriting, the inscriptions that accompany the drawings were actually transcribed by Francillon from Abbot's original notes, which were apparently discarded. Scudder interpreted "the mountains" to mean the mountains of Georgia. After all, Francillon's printed title page for this volume reads, "Drawings of the Insects of Georgia, in America." Abbot also figured three other butterflies that were "Met with by Mr Elliot at the mountains," or "Met with by Mr Eliot in his Tour to the Mountains": a female Speyeria cybele (Fabricius), a male Polygonia faunus (W. H. Edwards), and a male Lycaena phlaeas (L.). In his book on the butterflies of Georgia, Harris (1972) accepted Abbot's illustrations of S. idalia and P. faunus as valid records, but he was evidently unaware of the two other drawings. Clark (1937) also credited Abbot's drawing of P. faunus to Georgia, where the subspecies P. f. smythi Clark is currently rare and local in the higher elevations. Abbot's drawing clearly portrays the dorsal and ventral surfaces of this distinctive subspecies. Speyeria

cybele is locally distributed across the northern half of Georgia. Lycaena phlaeas has been recorded from several counties in northern Georgia. Except for a couple of unconfirmed sightings, there have been no additional records of S. idalia from Georgia. Because the nearest verified records of this species are from the mountains of North Carolina, about 175 miles to the north, some authors have questioned the presence of S. idalia in Georgia.

I became intrigued by these records when I examined Abbot's drawings in London. The four species from "the mountains" are illustrated in the sixth volume. Although Francillon's title page for this volume is dated 1792, a group of these drawings were completed much later. The notes for an illustration of Heliconius charithonia (L.) refer to the Georgia naturalist Augustus G. Oemler (1773-1852), whom Abbot did not meet until 1805. This drawing and four others share similarities with those that mention "Mr. Elliot." Though scattered through the volume, these nine drawings are consecutively numbered, lack ink borders, and are more loosely rendered. They were obviously completed together after 1805. Evidence indicates that Abbot's insect drawings in London were probably bound into 17 volumes around 1810. Each volume bears Francillon's distinctive bookplate, proving that they were bound prior to his death in 1816. The collection was acquired by the British Museum in 1818.

So, who was "Mr. Elliot?" Stephen Elliott (1771-1830) was an industrious planter and banker from Beaufort, South Carolina (Fig. 1). He studied at Yale and served in the South Carolina legislature. Elliott owned several plantations, including one called Vallambrosa, located near the town of

Silk Hope along the Ogeechee River in Georgia, about 15 miles northwest of Savannah. He had a general interest in natural history, but was especially fond of mineralogy, paleontology, botany, entomology, and ichthyology. It was through these pursuits that he became acquainted with John Abbot, who would misspell his friend's name with a single "t". The two traded specimens over the years and Abbot was mentioned in Elliott's groundbreaking book, "Sketch of the Botany of South-Carolina and Georgia" (Elliott 1816-1824). Elliott also acquired some insect drawings from Abbot.

To learn more about Elliott's "journey to the mountains," I studied his surviving correspondence in the Grav Archives Herbarium (Harvard University) and the Historical Society of Pennsylvania, particularly letters that he exchanged with the Pennsylvania botanist Henry (Gotthilf Heinrich Ernst) Muhlenberg (1753-1815). Additional clues were found in other letters and manuscripts that were transcribed by Darlington (1843), Ewan & Ewan (1963) Miller (1988), and Miller & Hart (2000). I was able to confirm that Elliott visited the mountains, but he bypassed northern Georgia.

Elliott embarked on his trip during the summer of 1808. He traveled northward to Philadelphia for "the health of an amiable Wife and Daughter" (his other children stayed behind in South Carolina). They journeyed overland, which may have been preferred by the ailing family members. This also afforded Elliott the opportunity to collect natural history specimens along the way. He was then chiefly interested in minerals and fossils with the hope of forming "a private Cabinet." On 16 August 1808, Elliott encountered the Scottish botanist John Lyon (17651814) at Strasburg, Virginia, in the Shenandoah Valley. Elliott later recalled, "I did not reach the mountains until I entered Virginia."

Continuing northward, Elliott visited Henry Muhlenberg at his home in Lancaster, Pennsylvania. Traveling alone on horseback, John Lyon had covered the 146 miles between Strasburg and Lancaster in four days, so the Elliotts probably reached Lancaster by 22 August. Muhlenberg encouraged Elliott's interest in botany, later culminating in Elliott's twovolume book on the plants of South Carolina and Georgia. Muhlenberg described Elliott as an "excellent Botanist and Entomologist" who "has seen and examined a great many Plants, Minerals, and Insects." Sometime before the first week of September 1808, the Elliotts left Lancaster and rode east for 62 miles along the Philadelphia and Lancaster Turnpike, the first hardsurface road in America. The family reached Philadelphia within two days. Elliott spent a great deal of time in Philadelphia with the legendary artistnaturalist Charles Willson Peale and his son, Rubens, who "caught a considerable share of Mr. Elliots ardour". Hoping that the sea air would benefit Elliott's wife and daughter, the family left Philadelphia on 21 September and traveled to New York City. With the help of local naturalists who were introduced through C. W. Peale, Elliott searched for interesting specimens around Philadelphia and New York City.

Due to the unexpected death of a daughter back in South Carolina, Elliott and his family hastily departed New York. They returned overland to Beaufort, arriving on 25 November 1808. Upon their arrival, they learned that Elliott's Mother-in-law and a close friend had also died. In addition, three of Elliott's children were suffering from "intermittent fever." To escape this anguish, Elliott took his entire family to their plantation on the Ogeechee River, stopping first in Savannah for a brief stay. Elliott returned to Beaufort on 14 February 1809.

Evidence suggests that Elliott collected his butterflies ca. 1805-1810, which is consistent with the timing of his trip through the mountains to Philadelphia. It was perhaps during his brief stay at Savannah in late 1808 that Elliott presented Abbot with the specimens that he had collected. Abbot lived in Savannah from 1806 to 1813. He probably illustrated Elliott's specimens soon after their receipt and sent the resulting artwork without delay to John Francillon in London.



Fig. 1. Stephen Elliott (1771-1830) (from Sargent 1894).

Based on his itinerary, Elliott presumably followed the Great Wagon Road on his journey northward (Fig. 2). This path, also known as the Great Philadelphia Wagon Road, began as an Iroquois Indian trade route. It later developed into an important corridor for European settlers traveling southward from Philadelphia (Rouse 1995). The Great Wagon Road snaked through highlands of Pennsylvania, Maryland, West Virginia, and Virginia, mostly within the Ridge and Valley region at the edge of the Blue Ridge Mountains. The section of road that crossed through southwestern Virginia was characterized by John Lyon as "rough hilly thinly settled country." Continuing southward, the road meandered through the piedmont of the

Carolinas, ultimately terminating at Augusta, Georgia. Feeder paths sprouted from the main road, affording access to additional lands along the route and beyond Augusta into Creek Indian territories. The exact date that the Elliotts began their journey is unknown, but it can be estimated from the detailed journals of John Lyon who recorded the distances and dates that he traveled this same route. On horseback, Lyon was capable of traversing the 850 miles between Beaufort and Lancaster in about four weeks. The Elliotts may have traveled by wagon. In any case, they likely progressed more slowly than Lyon. It is reasonable to assume that they set out from Beaufort around 15 July 1808 and reached Lancaster about five weeks later (Fig. 2).

Without further investigation, Scudder (1888-1889) and later authors assumed that because Abbot had lived in Georgia, the specimens from "the mountains" must have originated there. However, I have found no allusions to Elliott's presence in the mountains of northern Georgia at any time. In 1809, while working on his book on the plants of South Carolina and Georgia, Elliott wrote of his desire to find "an assistant as skillful as the indefatigable Mr. Lyon to traverse the mountains while I continued my research in the low country." In the introduction of the second volume of his book, Elliott lamented, "The author has never had the leisure or opportunity to visit every portion of the district whose plants it includes." Plant records that were attributed to Elliott by Weatherby (1942) and Smith (1962) are from coastal locations. Elliott's business responsibilities were great, restricting his field work primarily to the vicinities Savannah, Beaufort, and of Charleston.

With the exception of South Carolina, S. cybele was likely frequent along most of Elliott's route to Philadelphia. Elliott's specimen of P. f. smythi was undoubtedly collected in the higher

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elevations of Virginia where the species still occurs today. The southern range limit of L. phlaeas in 1808 is unclear. Nineteenth century specimens and publications imply that the species may have been absent in the southeastern states, but it was probably widespread north of Virginia. Lycaena phlaeas ab. 'fasciata' Strecker was described from "Florida," but this appears to be the result of a labeling error. The female type specimen (now at FMNH) was purportedly supplied to Strecker by the Cincinnati naturalist Charles Dury (1847-1931), who listed this species only from Avondale, Ohio in an 1874 handwritten catalogue of his own collection (Calhoun, unpublished). Smyth (1890) was the first to credibly report L. phlaeas from the southeast, documenting its abundance at two locations in South Carolina in 1889. Although it was not reported from Georgia until the early 1930s, L. phlaeas possibly entered the state, via the mountains, during the mid to late nineteenth century. The potential absence of L. phlaeas in the southern Appalachians during Elliott's lifetime supports the argument that none of his butterflies from "the mountains" were captured in Georgia.

As for S. idalia, there are no known records of this species from South Carolina and it was rare and local in the mountains of western North Carolina (Opler 1995, LeGrand & Howard 2007). On the other hand, it was once widespread and locally common where Elliott is known to have journeyed from Virginia northward to Philadelphia. Abbot portrayed S. idalia only one other time, around 1813. This specimen, however, was probably collected in New York by John E. Le Conte (Calhoun 2006). Abbot never again illustrated any of the species that he received from Elliott.

Acknowledgements

Copies of unpublished manuscripts were provided by Lisa DeCesare of the Harvard University Botany Archives and Steve Smith of the Historical Society of Pennsylvania. Librarians of the Entomology Library of The Natural History Museum, London, were very helpful during my visit. David M. Wright opened my eyes to the Great Wagon Road and its influence on the settlement of the southeastern United States.

Literature Cited

Calhoun, J. V. 2006. John Abbot's "lost" drawings for John E. Le Conte in the American Philosophical Society Library, Philadelphia. J. Lepid. Soc. 60:211-217 Clark, A. H. 1937. A new subspecies of the nymphalid butterfly *Polygonia faunus*. Proc. U. S. Nat. Mus. 84:219-222.

- Darlington, W. 1843. Reliquiae Baldwinianae: selections from the correspondence of the late William Baldwin, M. D. surgeon in the U. S. Navy, with occasional notes, and a short biographical memoir. Kimber & Sharpless, Philadelphia. 346 pp.
- Elliott, S. 1816-1824. Sketch of the botany of South-Carolina and Georgia. 2 vols. J. R.

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Fig. 2. Likely route taken by Stephen Elliott during his "journey to the mountains" in 1808.

Gynandromorph of Acleris celiana

Continued from pp. 79

I have never seen such a striking example in which both the male and female parts are as well developed as they are in this gynandromorph of *Acleris celiana*.

I thank Ronald Hodges, Eugene, Oregon, for sharing Elaine's unpublished work with me, and E. C. Knudson, Houston. Texas, for providing the specimens. Thomas Systematic Henry, Entomology Laboratory, USDA, National Museum of Natural History, provided comments on the brief manuscript.

LITERATURE CITED

Blanchard, R. and H. Descimon. 1988. Hybridization between two species of swallowtails, meiosis mechanism, and the genesis of gynandromorphs. Journal of the Lepidopterists' Society 42: 94-102.

- Bridgehouse, D. W. 2000. Bilateral gynandromorph of *Hyalophora cecropia* (Lepidoptera: Saturniidae) in Nova Scotia. Northeastern Naturalist 7: 237-240.
- Clarke, J. F. G. 1941. The preparation of the genitalia of Lepidoptera. Bulletin of the Brooklyn Entomological Society 36: 149-161.
- Crolla, J. 2004. Bilateral gynandromorphs of Orthonama obstipata (Geometridae) and Bomolocha bijugalis (Noctuidae). News of the Lepidopterists' Society 46: 79, 77.
- Eitschberger, U. and M. Wiemers. 1990. Ein Halbseiten - Gynandromorph von *Papilio machaon* Linnaeus, 1758 (Lepidoptera, Papilionidae). Atalanta 20: 273-274.
- Hessel, S. A. 1964. A bilateral gynandromorph of *Automeris io* (Staurniidae) taken at mercury vapor light in Connecticut. Journal of the Lepidopterists' Society 18: 27-31.
- Ivinskis, P. and A. Saldaitis. 2001. A gynandromorph of Hyponephele narica (Lepidoptera: Nymphalidae, Satyrinae). Phegea 29: 33-34.

- Klots, A. B. 1970. Lepidoptera, pp. 115-130. In: S. L. Tuxen, ed., A Taxonomist's Glossary of Genitalia in Insects, 2d ed. Munksgard, Copenhagen.
- Kutis, J. S. and J. B. Heppner. 1990. Gynandromorph of Nacophora quernaria in Florida (Lepidoptera: Geometridae). Tropical Lepidoptera 1: 42.
- Manley, T. R. 1971. Two mosaic gynandromorphs of *Automeris io* (Saturniidae). Journal of the Lepidopterists' Society 25: 234-238.
- Scriber, J. M. and M. H. Evans. 1988. Bilateral gynandromorphs, sexual and/or color mosaic in the tiger swallowtail butterfly, *Papilio glaucus* (Lepidoptera: Papilionidae). Journal of Research on the Lepidoptera 26: 39-57.
- Warren, A. D. 2006. A bilateral gynandormorph of Oeneis chryxus (Lepidoptera: Nymphalidae: Satyridae). News of the Lepidopterists' Society 48: 120, 121.
- Winokur, L. 2002. A gynandromorph of Gonepteryx cleopatra L. (Lepidoptera: Pieridae). British Journal of Entomology and Natural History 15: 137-139.



Figs. 1-2. Genitalia of Acleris celiana. 1. Gynandromorph, USNM slide 26293. 2. Typical female, USNM slide 26294.



Figs. 3-10. Genitalia and abdominal integument of Acleris celiana. 3. Typical male genitalia, ventral aspect, USNM slide 26292. 4. Typical male genitalia, dorsal aspect. 5. Gynandromorph genitalia, dorsal aspect. 6. Lateral view of abdominal integument of dissected gynandromorph. 7. Hourglass-shaped sclerite of typical male tergum VIII. 8. Distorted sclerite of gynandromorph tergum VIII. 9. Location of possible apophysis anterioris, immediately left of number. 10. Sclerotized patch of typical male sternum VIII.

2007 Meeting Photos - Bakersfield, California



Bob Belmont and Ranger Steve look over specimens of Kelly Richers' collection, brought to make a research room at the meeting. Photo by Kelly Richers.



A few of the 'moth-ers' who took to the lights on Mount Pinos on Sunday night. Photo by Kelly Richers.



Journal editor Brian Scholtens, Wayne Wehling, Mike Toliver and John Brown. Photo by John Calhoun.



Candice Harris, Connie Saldivar, and Rosalinda Chairez, assisting at the reception table. Photo by Kelly Richers.



Stephen Spomer and Ken Davenport pause for the camera before returning to their discussion. Photo by John Calhoun.



Charlie Covell and Robert Michael Pyle not pausing for the camera and continuing their discussion. Photo by John Calhoun.

Annual Meeting in Bakersfield a Success!

Ron Leuschner

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The 58th annual meeting of the Lepidopterists' Society was held in Bakersfield, California, from July 12th through the 15th, 2007. Over 150 people registered for the meeting, and it was proclaimed a great success by those in attendance.

The first cooperating entity was the weather. Temperatures kept in the 90's throughout the meeting, and with the low humidity, it was not as hot as virtually everyone expected. Ken Davenport took butterfly enthusiasts on two field trips, one on the 11th and one on the 12th, exploring the Kern River Valley and the Mount Pinos area with a large contingent of net-wielding and camera toting followers.

On arriving at the Holiday Inn Select, the venue for most events, registrants were presented with nice tote bags that had a multitude of goodies inside, from calculators to butterfly and moth lists, from maps to brochures, with a few locally made candies thrown in. Several friendly assistants at the reception table directed people to the events.

On the evening of Wednesday the 11th those early arrivers who answered the call went to the Lengthwise Brewery to have dinner and try some locally brewed flavors. A good time was had by all, not the least among them those who got lost and stopped to talk to some locals before being pointed in the right direction.

On Thursday the Executive Council met, with some 24 persons present for most of the day as the accounts for the society were reviewed. Good news was received all around, as the Society is in the black with no dues increase forecast for the near future. There is a huge reserve for life members, making the Society fully compliant with new nonprofit laws, and the officers of the Society made reports on all the different areas of committee work as well as publications. Both the *News* and the *Journal* costs were within projected expectations, and the budget is well within what was expected, even with the new color being put into the *Journal* and *News*.

The large group then went to lunch at a local Chinese restaurant, and more food was provided than could be eaten. (Note how we record the important things here in this report!) After lunch the meeting continued until late afternoon with the business being concluded before 4:30 on schedule. A reception, partially hosted by AXA Investments and Bioquip, was held following this with the shrimp platters disappearing quickly and the drink coupons going just as fast. Many friends met and had a great time telling about the big ones that didn't get away.

While the Executive Council met the Education Committee put on seminars to students and teachers at the California Living Museum, educating teachers how to teach about Lepidoptera and introducing students to the study of butterflies and moths.

Friday opened to the presentations of papers, beginning with a very nice symposium of California Lepidoptera, moderated by John Brown. John Adams Comstock award winner Ken Davenport started with a presentation of a number of endemic and local butterflies, and the day progressed with sessions moderated by Jerry A. Powell, Susan J. Weller and Eric H. Metzler. To the enjoyment of everyone present, all the presentations were on time, and were accented by the giveaway pens and notepads available at the tables, as well as the refreshments at the rear of the room.

On Friday evening the Bakersfield Historical Society guided two busloads of participants through old Bakersfield, presenting a very interesting aspect of the town of which few were aware. The tour ended at the Fox Theatre, a beautifully restored old time stage theater in the middle of the city.

Immediately following this everyone drove or rode to the California Living Museum on the edge of the Kern River, where a sumptuous barbeque of steak, potatoes and even butterfly shaped cookies was served by a number of helpers. A mariachi band, Mariachi Tapatio, played for those in attendance before the meal. Afterwards moth collecting was available on the nature trail of this zoo with a riparian habitat.

Saturday's sessions went as well as Friday's, with moderators Ronald Leuschner and Felix Sperling coordinating the morning presentations, and Julian Donahue doing the honors in the afternoon.

There was a separate poster room and there were vendors of books and goods, notably Bioquip, which had a large display for all the visitors who needed materials. Following the presentations but prior to the banquet there were book signings and materials for new books to be published soon made available.

The banquet was a notable success, with the food served beautifully in an elegant setting. Ken Davenport spoke when awarded the Comstock Award by the Pacific Slope Section (this was a combined meeting) and President James Adams entertained the troops with a nice presentation after the dinner.

On Sunday there was a well attended business meeting in the morning, after which the Pacific Slope section met and tentatively decided upon meeting in

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Your Field Guide is Lying To You (Unless It's Mine)

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Sometimes you have to put your money where your mouth is. So to speak.

I teach a course in Biogeography for seniors and beginning graduate students. A couple of lectures are devoted to the ins and outs of range mapping and the interpretation of published maps. This is the subject traditionally called *areography*—the study, analysis and comparison of the distribution areas of species or higher taxa, a subject sometimes more or less synonymized with macroecology today. The mobility of most animals makes mapping their geographic ranges difficult. Diurnal, seasonal and annual changes in distribution may occur; how can these be reflected in a map? What is the distribution of the Arctic Tern? It nests on the shores of the Arctic Ocean and winters in the subantarctic. Does its range include all the vast territory it traverses in transit twice a year? We need to distinguish breeding vs. non-breeding ranges. The Monarch Butterfly (Danaus plexippus) is a familiar, down-home example of this kind of problem, but the Painted Lady (Vanessa cardui) is worse. Its breeding range includes nearly all of the North Temperate Zone, but it overwinters only in limited areas-along the U.S.-Mexico border and on the southern and eastern fringes of the Mediterranean Basin, where it breeds in late winter. Some ranges periodically expand and contract. There is a core range where the species is always present, as well as range occupied in favorable years or seasons but then vacated. The Buckeye (Junonia coenia), the Little Sulphur (Pyrisitia lisa) and the Marine Blue (Leptotes marina) are familiar examples of butterfly species whose summer, temporary ranges usually far exceed

their core ranges. In such cases one can use two colors or shadings to distinguish the two on a map. But the Painted Lady has no core range; it vacates its entire summer range in winter and its entire winter range in summer, but unlike most migratory birds it breeds in both. What to do?

The quality of published range maps is extremely variable. Among the factors affecting their veracity are:

The accessibility of the area. If we look at a detailed dot map of the distributions of high-mountain butterflies, whether in the Sierra Nevada or the Peruvian Andes, the dots seem aligned in odd ways, and there are big gaps between the aligned groups of dots. What we are really looking at is a map of the roads along which people can collect easily! Not many people backpack into the intervening terrain with a net—even fewer in the Andes than in the Sierra. We generally do not know if this results in significant distortions of the ranges.

The number of workers generating the data. Not infrequently, there is only one published map of a distribution and it gets repeated over and over again, with no new information included, giving it an air of undeserved authority if not finality. In the most recent monograph of the *Pieris napi* group, ranges are plotted as dot maps. For Western Europe and much of North America there are many dots. For eastern Europe and parts of North America there are fewer dots. For most of Asia except Japan, there are only very widely-scattered dots. This says nothing about the density of populations or the area occupied. It says everything about the number of

collectors there, or working there. The recent explosion of good data from the southern rim of the former USSR will dramatically alter our perceptions of butterfly biogeography in that part of the world, which at least for the moment has become reasonably accessible.

The accuracy of the data. Range maps are only as good as the identification of the organisms. Incorrect IDs lead to misleading maps. Incorrect interpretation of locality data on specimen labels is another problem. In one case the Ruddy Copper (Lycaena rubidus) was mapped as occurring in an isolated population in California's San Joaquin Valley (it actually does not cross the Sierra Nevada) based on the confusion of two "Farmingtons" (one in CA, one in Nevada). Another wonderful example involves the typelocality of a horsefly (Diptera: Tabanidae) which was generally given as "New York," although the species only occurs in the Pacific Northwest. Ultimately it was realized that people were misreading the flowery Victorian script on the type label as "NY" when it actually read "WT"-Washington Territory. In addition to honest errors like these, there are problems of dealers mislabeling specimens to fetch higher prices (common tropical butterflies historically were "worth" a lot more if "caught" in Texas or Florida!)(I once examined a lot of sulphurs labeled by a dealer as coming from the Falkland Islands, where there are no sulphurs; they were a mixed series of the common Patagonian Colias from the mainland and a common species from the Andean altiplano, 2500 miles away). There are also mislabelings resulting from oneupmanship among collectors, practical

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jokes (I know of one such enshrined in ranges; older ones often filled in the a museum), and even scientific fraud (the notorious case of John Heslop-Harrison and the island of Rhum, told in the book "A Rum Affair" (Karl Sabbagh, 1999)-most of his supposed "finds" were plants, but they also included the Large Blue, Maculinea arion).

The age of the data. Most range maps represent a mixture of distributional data of different ages, with no attempt to differentiate among old-not-recentlyverified reports, old-but-recentlyconfirmed reports, and new reports. The most famous example is the European Birch Mouse, Sicista betulina, in Sweden: it was reported in the far south of the country in 1835, in central Sweden in 1920, and about halfway-inbetween in the 1950s. What is its range? A range map of the Regal Fritillary from 1950 would look very different from one for today. Particularly now, amid rising concern about the biological effects of global warming, it is important to include the temporal dimension in range mapping.

"Grain" of distribution. Most published maps show large washes of color or shading. But of course, no species will be uniformly or universally distributed within the shaded areas. Most organisms, butterflies included, are fairly colonial. Their colonies or local populations may be tied to specific habitats or host plants. Users of field guides often approach these matters in a very unsophisticated way. "If it's shown as occurring in southeastern Pennsylvania, why don't I ever see it in my garden in southwest Philadelphia?"—never mind that it's a specialist found on serpentine grassland, a nicety all-too-often not mentioned in the book. Newer books tend to be careful about discontinuous

spaces between firm records when in fact the lack of records reflected a real lack of the species. The Broad-Winged Skipper (Poanes viator) occurs around the Great Lakes, along the Atlantic seaboard, the Gulf Coast and into the Mississippi Embayment and east Texas. But it does not occur in the vast interior. older implied. as works Our understanding of the repeating Great Lakes-Coastal Plain pattern of distribution, which I flagged in 1971, was hampered by coarse mapping that hid the pattern in the first place.

All of this came back to haunt me with the preparation of my book Field Guide to the Butterflies of the San Francisco Bay and Sacramento Valley Regions (2007). The publisher, University of California Press, wanted range maps. I talked them out of it, opting for a county-based checklist instead. The checklist provides for six kinds of records: regularly present, accidental, occasional, migrates through without breeding, extinct, and old, vague or suspect. I opted against range maps basically because, at the regional scale of this book, all of the potential mapping strategies struck me as having severe drawbacks. The coverage area includes 10 Bay Area counties and the Sacramento Valley portions of nine interior counties. I say "Sacramento Valley portions" because, as usual, county boundaries do not follow physiographic or climatic features they mainly cut across them. The Bay Area counties embrace the most complex and diverse physiographic, climatic and vegetational mosaic of any area that size in the United States. The Valley counties all include foothill areas - many include montane and even subalpine or alpine areas - which harbor many species not embraced in

this book. Thus the butterfly faunas of those counties would roughly double the species list! At the same time, the lower-altitude fauna mostly drops out goes uphill. Mapping as one distributions by county would only be misleading. Mapping by dots becomes impractical because the maps would have to be quite small-to be visible, the dots would be disproportionately large relative to the area represented.

And then there was an esthetics problem. If one extracts the counties in question from the map of California and prints a map in isolation, the result looks something like the outline of a rat-tailed maggot. The word "gerrymander," referring to an oddlyshaped electoral district whose boundaries are drawn for political advantage, harks back to a salamanderlike district created by the early 19th-Century Massachusetts politician Elbridge Gerry. Either the map would be imbedded in a map of at least the northern half of California, which would be too "busy" and further reduce its visual impact, or it would stand alone as a constantly repeated and seemingly incongruous outline of a rat-tailed maggot-a shaded rat-tailed maggot.

I gave up.

It is my sincere hope that my book will not lie to you about anything. But at least I can be sure the range maps won't.

Literature Cited

- Sabbagh, K. 1999. A Rum Affair. DaCapo press. Shapiro, A.M. 1971. Postglacial biogeography and the distribution of Poanes viator (Hesperiidae) and other marsh butterflies. Journal of research on the Lepidoptera 9: 125-155.
- Shapiro, A.M. and T.D. Manolis. 2007. Field Guide to Butterflies of the San Francisco Bay and Sacramento Valley Regions. University of California Press.





Dear Editor,

I read with interest David Wagner's article in the Summer, 2007, issue of the NEWS (Volume 49, Number 2). He criticized an article which apparently maintained that leps should be studied alive, and not killed.

I am not enough of an entomologist to judge this argument, but I did find one point that resonated strongly with my beliefs. To quote Wagner: "Great conservation battles are being fought now on a planetary scale. We (and butterflies) have much to gain if we can stand together: collectors and watchers, amateurs and professionals, entomologists and botanists to carry forward a common message to change land use policies and practices at local, regional, national, and global levels...this should be our focus; the need is urgent."

best known Perhaps the of lepidopterists, Paul Ehrlich, recognized long ago that humans have the potential to cause irremediable harm.(1) His prediction from four decades ago is coming true, although perhaps not in the ways he foretold. Human numbers and consumption are out of control. We are using at least 25 % more resources than are available on our planet, according to the ecological footprint concept.(2)

I feel that it is the responsibility of anyone who is concerned about the future of butterflies, moths and, indeed, all life to do more than just change land use policies. We must limit our family size and decrease our consumption. Biologists who understand the earth's limitations and are worried about extinction of species should feel obligated to help spread these messages to their students and their communities.

Mailbag...

To quote Pogo: "We have met the enemy and he is us."(3)

References:

 Ehrlich, P.R. 1968. The Population Bomb. Ballantine Books. New York.
<u>www.ecofoot.net</u>
Kelly, W. 1970. Earthday poster.

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STUDER ANTIPIT.

Editor:

As I told him over the phone, Dave Wagner badly misinterprets my piece on Edmund Selous ("Dead Bugs Do Tell Tales," Summer 07, commenting on "Edmund Selous and the Wisdom of the Great Morpho," Spring 07). There is absolutely nothing in Wagner's article with which I disagree—except his reading of my article as an anticollecting statement on my part. It was only a few years ago that some people were touting me as a pro-collecting candidate for office in the Society to counter a perceived anti-collecting tilt!

The article was intended as a historical account and nothing more, illustrating that the issues raised in the debate over collecting have changed little, if at all, in nearly a century. It was written in the context of a project undertaken partly in connection with our Humanities Institute at UC Davis, on the history of pro- and anti-butterfly collecting attitudes in the West. The book is little-known if not forgotten and I thought it would be of interest to our readers to see what an early 20th-Century animal-rights activist had written. You may have noticed that I

attempted to give a "fair and balanced" overview of Selous, whose controversial career elicited loud cheers and jeers in his lifetime. Let's lighten up and not be needlessly defensive.

For the record, in my recently-published "Field Guide to the Butterflies of the San Francisco Bay and Sacramento Valley Regions," I speak candidly about the cultural shift away from amateur collecting (especially out here on the Left Coast) and about why collecting sometimes is necessary (pp.252-253) and I also have an entire section headed "Amateurs can do important science!" (pp.273-274). Dave had not seen these comments when he drew his unwarranted conclusions.

I have to stop now because I need to go catch some female pierids for an experiment.

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Dear Editor:

Following a recent restructuring, The Association for Tropical Lepiodptera announces resumption of publication of the Journal of Tropical Lepidoptera. Catch up issues from 2003 (Volume 14) through 2007 (Volume 18) will be published this year. Holarctic Leopidoptera will be placed in diapause after the next issue (previously prepared for publication). With emphasis on tropical Lepidoptera and tropical conservation issues. membership in ATL and the Lepidopterists' Society should be complementary. The ATL annual meeting will be held in Gainesville,

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Observations of *Heraclides andraemon* larvae on Key Largo

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The Bahamian swallowtail (Heraclides andraemon bonhotei) was long thought to be only a temporary resident of the Florida Keys until a breeding population was reported on Elliott Key within Biscayne National Park (BNP) during the spring of 1972 (Brown 1973). Loftus and Kushman (1982) conducted extensive follow-up surveys on several islands within BNP but failed to locate any H. a. bonhotei. Minno and Emmel (1993) indicated that H. a. bonhotei continued to occur within the northern keys; however they reported that populations of the species were highly localized and sporadic in seasonal abundance from year to year. This may explain how follow-up surveys in the northern keys failed to observe H. a. bonhotei for several years after the initial reports. Although classified as federally endangered in 1976, H. a. bonhotei was ultimately de-listed once demonstrated that the species was not solely indigenous to the keys and that populations of the butterfly occurred commonly elsewhere in the Caribbean (Smith et. al 1994).

To our knowledge the last known occurrence of *H. a. bonhotei* in southern Florida was of an adult observed by Byrum (Buck) and Linda Cooper at John PenneKamp State Park in Key Largo on 14 October 1997. During the fall of 2006 it appeared as though *H*. *a*. bonhotei had returned to the keys, as Paula Cannon documented a population on Big Pine Key. This marked the first observations of Bahamian swallowtails from the lower keys in several decades. However, additional studies by Cannon (2006) appeared to indicate that the swallowtails occurring on Big Pine in 2006 were H. a. andraemon, a race

known to occur in Cuba. There were a number of strong wind events in the western Caribbean during the late summer and early fall months of 2006, these may have acted as a catalyst to bring unusual butterfly species, such as H. a. andraemon into the lower keys. Thus the status of H. a. bonhotei in the Florida Keys appeared to remain either extirpated or undetermined.

On 2 June 2007 the authors, along with Buck and Linda Cooper and Mary Ann Friedman, observed and photographed 2nd instars (n = 3) of *H. andraemon* spp. on northern Key Largo. The larvae (Figs. 1-3, pp. 101) were observed feeding on torchwood (Amyris elemifera) one of the known hostplants for H. a. bonhotei. Amyris elemifera is also a host for the federally endangered Schaus' swallowtail (Heraclides aristodemus ponceanus), adults and larvae of which were also present during this period. We returned to northern Key Largo on 8 June 2007 to in an attempt to locate both the originally observed larvae as well as adults, however we were not successful. We conducted additional visits to the area in the months that followed but also could not find signs of H. andraemon activity. Although not specifically looking for H. andraemon we also surveyed a number of other northern keys for butterfly activity in 2007, including islands within BNP, during the known flight period of the species, and found no other signs of H. andraemon.

Given the known occurrence of two H. andraemon races within the Florida Keys it remains unclear which subspecies we encountered on Key Largo. However the population of H. a.

andraemon documented on Big Pine Key during the fall of 2006 appeared to be localized; we have not encountered the species on any island north of initial reports in the lower keys. Thus we are hopeful that what was observed on Key Largo was a sign that H. a. bonhotei does indeed still occur in the northern keys, where it also retains a breeding population. Further monitoring will be required to better determine the distribution of H. andraemon races throughout the keys.

Acknowledgements

The authors thank John V. Calhoun and Marc C. Minno for confirming the identification of the *H. andraemon*. We thank Buck and Linda Cooper, Mary Ann Friedman, James Spencer, Marc Minno, Maria Minno and Dennis Olle for assistance in the field. We also thank Pat Wells and the staff of John PenneKamp State Park for technical assistance. We thank Ernie Cowan for assistance with permitting.

Literature Cited

- Brown, L.N. 1973. Populations of *Papilio* andraemon bonhotei Sharpe and *Papilio* aristodemus ponceanus Schaus in Biscayne National Monument, Florida. Journal of Lepidopterists. Society 27(2):136-140.
- Cannon, P. 2006. Bahamian swallowtails in the United States: first reports of the Cuban subspecies. American Butterflies. 14 (3-4): 4-15.
- Loftus, W.F., and J.A. Kushlan. 1982. The status of the Schaus' swallowtail and Bahama swallowtail butterflies in Biscayne National Park. The National Park Service, Everglades National Park. Report M-649. 18 pp.
- Minno, M. C and T. C. Emmel. 1993. Butterflies of the Florida Keys. Scientific Publishers, Gainesville, Florida. 168 pp.
- Smith, D. S., L. D. Miller & J. Y. Miller. 1994. The Butterflies of the West Indies and South Florida. Oxford University Press, New York. 264 pp. 32 pl

Demographic Study of the Membership of the Lepidopterist' Society

Bill Conner, Past President of the Lepidopterists' Society

Dept. of Biology, Wake Forest University, P.O. Box 7325, Winston-Salem, North Carolina 27109-7325 conner@wfu.edu

Last year at the Gainesville meeting the Executive Council of the Lepidopterists' Society requested that the Assistant Secretary Julian Donahue add a question on the annual dues notice to assess the age distribution of our current membership. Julian reported on the results of this survey at the EC meeting in Bakersfield. The results shown below are both interesting and sobering.

Most of our members are between the ages of 50 and 70. Ours is a rapidly aging society. Clearly we must do all we can to recruit young people to the study of Lepidoptera. While our education committee continues to work hard at providing an education event for young students at each meeting, and the society through Bob Pyle is investigating the creation of a program that would put nets in the hands of many school children, I would ask each and every one of you to make a special effort this year to mentor a young person in the study of Lepidoptera. Please consider giving a presentation or workshop at a local school or to a local scout group. The Lepidopterists' Society has a special membership rate for students. Please recruit gifted students into the society.

Together we can make sure that our society has a young, vibrant cohort that is vital to the continuing health of our organization.

Retention of young members is also something that we need to work on. Many of our students join for a year or two and then allow their membership to lapse. I would like to see an award established that would fund student research and meeting travel. Such awards have resulted in continued interest in organizations like ours and I believe would be a positive step toward retaining young lepidopterists.

Julian plans to continue to collect data on our membership and hopefully we will see the lower age groups grow in the near future. We have also asked him to collect data on the gender of our membership. We believe that participation by women in our Society is on the increase and we would like to document this important trend. Many thanks to Julian for his hard work.



Age Distribution of Members, 2007 (624 Respondents, 980 Returns)

Membership Update...

Julian Donahue

This update includes all changes received by 23 August, 2007

"Lost" Members

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

Homer, T.J.G. (Life Member, Maidenhead, Berks, England)

New and Reinstated Members:

members who have joined/renewed/ been found/or rescinded their request to be omitted since publication of the 2006 Membership Directory (not included in the 2006 Membership Directory; all in U.S.A. unless noted otherwise)

Baltosser, William H. (Ph.D.): Dept. of Biology, University of Arkansas at Little Rock, 2801 South University Avenue, Little Rock, AR 72204-1000.

Elmansoumi, Deirdre: 545 Brussels Street, San Francisco, CA 94134-1713.

Frenchu, Kiersten: 715 Sergeantsville Road, Stockton, NJ 08559-1130.

Homziak, Nicholas: [address omitted by request]

Lequerica Chiong, Hernan Augusto: Tavara 395, Iquitos, Peru.

Murphy, Shannon (Ph.D.): [address omitted by request]

Sypkens, Steven: 2250 NE 288th Street, Turney, MO 64493-2686.

Address Changes

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

Bray, Richard O.: HC 61, Box 42073, Estes Park, CO 80517-9809.



Clayton, Dale L.: 770 Greenoch Loop, Oak Harbor, WA 98277-9435.

Dunford, James C.: 2370 SW Archer Road, Apt. 24, Gainesville, FL 32608-1055.

Edwards, E.D.: 56 Lachlan Street, Macquarie, ACT 2614, Australia.

Ellsbury, Michael M. (Dr.): 70675 Eden Avenue, Fairbury, NE 68352-5592.

Grinter, Chris: 6364 Old Oak Drive, Libertyville, IL 60048-9446.

Heck, Mary L.: 7648 Benderson Drive, Westerville, OH 43082-9517.

Hedges, Frank R.: 123 Robertson Road, Kerrville, TX 78028-8610.

Lohman, David (Ph.D.): Department of Biological Sciences, National University of Singapore, 14 Science Drive 4, Singapore 117543.

McCaffrey, Joanna: 740 West Fulton Street, Apt. 702, Chicago, IL 60661-1078.

Oemick, Donald A.: 305 Hudson Street, Bremen, GA 30110-1995.

Patterson, Shawn (Mrs.): 1602 Woods Drive, Mission, TX 78572-7479.

Pease, Roger W., Jr. (Dr.): 133 Old Farm Road, Springfield, MA 01119-2823.

Reed, Robert D. (Dr.): Dept. of Ecology & Evolutionary Biology, University of California Irvine, 321 Steinhaus Hall, Irvine, CA 92697-2525. **Stanford, Ray E. (M.D.)**: 1430 Village Center Drive, Medford, OR 97504-4502.



Speyeria idalia in Georgia

Continued from pp. 84

Schenck, Charleston, South Carolina. 1349 pp, 10 pl.

- Ewan, J. & N. Ewan. 1963. John Lyon, nurseryman and plant hunter, and his journal,
- 1799-1814. Trans. Am. Phil. Soc. 53(2):1-69.
- Harris, L. 1972. Butterflies of Georgia. Univ. Oklahoma Pr., Norman. 324 pp., 13 pl.
- LeGrand, H. E., Jr. & T. E. Howard, Jr. 2007. Notes on the butterflies of North Carolina. Fourteenth approximation. Website, http://
- 149.168.1.196/nbnc/ (March 2007). Miller, L. B. (ed.). 1988. The selected papers of
- Charles Willson Peale and his family. Volume 2, part 2, Charles Willson Peale: the
- artist as museum keeper, 1791-1810.
- Yale Univ. Pr., New Haven, Connecticut. xxv, 679-1318.
- Miller, L. B. & S. Hart (eds.). 2000. The selected papers of Charles Willson Peale and
- his family. Vol. 5, the autobiography of Charles Willson Peale. Yale Univ. Pr., New
- Haven, Connecticut. xli + 513 pp.
- Opler, P. A. 1995. Lepidoptera of North America. 2. Distribution of the butterflies
- (Papilionoidea and Hesperioidea) of the eastern United States. Contr. Gillette Mus. Ins. Biod. 72 pp.
- Ins. Blod. 72 pp.
- Rouse, P., Jr. 1995. The great wagon road: from Philadelphia to the south. Dietz Pr., Richmond, Virginia. 292 pp.
- Sargent, C. S. 1894. Stephen Elliott. Garden &
- Forest 7:201-202, portrait 204. Scudder, S. H. 1888-1889. Butterflies of the
- eastern United States and Canada. 3 vols. Cambridge, Massachusetts. 1958 pp., 89 pl.
- Cambridge, Massachusetts. 1958 pp., 89 pl.
- Smith, C. E., Jr. 1962. Henry Muhlenberg botanical pioneer. Proc. Amer. Phil. Soc. 106:443-460.
- Smyth, E. A. 1890. Notes on the southern distribution of some common butterflies. Psyche 5:347-348.
- Weatherby, C. A. 1942. A list of type specimens in Elliott's herbarium. Rhodora 44:249-262.



The Society has learned of the death of the following member. Our condolences to his family.

Remington, Charles Lee, at the age of 85 on 31 May 2007 in Hamden, Connecticut. With Harry K. Clench, Dr. Remington was a co-founder of The Lepidopterists' Society. He was elected an Honorary Life Member of the Society in 1966. His legacy will be remembered more extensively elsewhere in this and future issues.

The Marketplace

IMPORTANT NOTICE TO ADVERTISERS: If the number following your advertisement is "491" then you must renew your advertisement before the next issue! Remember that all revisions are required in writing.

Books/Videos

200+ RAINFOREST BUTTERFLIES ON FILM! New edition now available on DVD of our 50-minute best-seller "Diversity in the Rainforest" filmed in Peru 1995, with clips of many additional species from our Library. Order through website or direct. Also others in "The World's Butterflies on Film", our ongoing series in VHS (PAL or NTSC) at US\$15 each + freight: species from Brazil, Malaysia, Ghana, Kenya, Philippines, South Texas, Europe. Kenya & Brazil also available DVD. Contact johnbanks in @cinebutterflies.com - or surf to Cinebutterflies.com - or mail to John Banks, 28 Patshull Road, London NW5 2JY, UK 492

For Sale: Noctuidae Europaeae Vol. 1, 2, 4, 5, 6, 7, 10. Books are new, for sale for 3/4 the price of current value. Price Euro 892, - for sale: 670. - plus postage.

The aim of the Marketplace in the **News of the Lepidopterists' Society** is to be consistent with the goals of the Society: "to promote the science of lepidopterology...to facilitate the exchange of specimens and ideas by both the professional worker and the amateur in the field,..." Therefore, the Editor will print notices which are deemed to meet the above criteria, without quoting prices, except for those of publications or lists.

No mention may be made in any advertisement in the **News** of any species on any federal threatened or endangered species list. For species listed under CITES, advertisers must provide a copy of the export permit from the country of origin to buyers. **Buyers must beware and be aware.**

Only members in good standing may place ads. All advertisements are accepted, in writing, for two (2) issues unless a single issue is specifically requested. Henry Hensel, 145 Bellevue Str., Edmundston, N.B. Canada E3V 2E2, Tel. 507-735-2332. 491

Wanted: C.A. Bridges (1988, 2nd ed.) Catalogue of Family-Group and Genus-Group Names (Lepidoptera: Rhopalocera). C.A. Bridges (1988) Bibliography (Lepidoptera: Rhopalocera) 576p. C.A. Bridges (1988) Catalogue of Lycaenidae \land Riodinidae (Lepidoptera: Rhopalocera). The three volumes were printed by the author. Jean Hanus, 2 rue de Belgrade, 38000 Grenoble, France Tel/Fax: +33 4 76 43 33 96, *jean.g.hanus@wanadoo.fr* 491

For Sale: Butterflies of the Australian Region (Vol. 1), Bernard D'Abrera (1977), Lansdowne Press, Melbourne. 415 pp. Extensive color plates and photos. This edition is out of print. This copy is in excellent condition, with marginal discoloration only. \$160.00 plus \$6.95 shipping. Glenn A. Gorelick,

Note: All advertisements must be renewed before the deadline of the third issue following initial placement to remain in place.

All ads contain a code in the lower right corner (eg. 481, 483) which denote the volume and number of the **News** in which the ad. first appeared. *Renew it Now!*

Advertisements <u>must</u> be under 100 words in length, or **they will be returned for editing**. Ads for Lepidoptera or plants must include full latin binomials for all taxa listed in your advertisement.

Send all advertisements to the Editor of the News!

The Lepidopterists' Society and the Editor take no responsibility whatsoever for the integrity and legality of any advertiser or advertisement.

360 Toyon Road, Sierra Madre, CA 91024-1147 email: butterflyguy44@verizon.net 492

For sale:Book by David W. MacDougall A Field Guide to the Karner Blue Butterfly. 2007. \$8 postpaid in US Send checks to: ECOS, PO Box 9118, Niskayuna, NY 12309. Signed copies available on request, no charge. 493

Wanted: 1988 Annotations on the Catalogue of Papilionidae and Pieridae, 1:4 pp. Ch. Bridges, publisher, 502 W. Main, 120., Urbana, Illinois 61801, USA [Comprises addenda and corrigenda in the section on Atroplanur and relevant libraries] Kent H. Wilson PO. Box 1097 Edmond, Oklahoma, USA 73083-1097. 493

Livestock

Wanted: Michigan lepidopterists only; would like to exchange lepidoptera livestock. Contact: Ken Knight 1022

Disputes arising from such notices must be resolved by the parties involved, outside of the structure of The Lepidopterists' Society. Aggrieved members may request information from the Secretary regarding steps which they may take in the event of alleged unsatisfactory business transactions. A member may be expelled from the Society, given adequate indication of dishonest activity.

Buyers, sellers, and traders are advised to contact your state department of agriculture and/ or PPQAPHIS, Hyattsville, Maryland, regarding US Department of Agriculture or other permits required for transport of live insects or plants. Buyers are responsible for being aware that many countries have laws restricting the possession, collection, import, and export of some insect and plant species. Plant Traders: Check with USDA and local agencies for permits to transport plants. Shipping of agricultural weeds across borders is often restricted. For Sale: (US only) Cocoons and ova of *Hyalophora cecropia*. Send SASE to: Alan M. Vosefski 3320 Old Kirkwood Drive., Virginia Beach, VA 23452 492

Wanted: Contact with someone who knows how I can get artificial hosts for caterpillars out of the normal breeding season, such as Saturnids that emerge during the cold season. Ken Knight 1022 Widdicomb N. W., Grand Rapids, MI 49504 or call 616-459-4598. 493

For Sale (USA only): Cocoons/ova of Antheraea polyphemus, Callosamia promethea, Hyalophora cecropia, Paonias myops. Karl W. Ploran, 110 Route 20, Chester, MA 01011-9642; karlmir@verizon.net 493

Specimens

Purchase/Exchange: Want to buy all butterflies from South America and Africa, also exchange butterflies of Iran with all butterflies in the world. Ahmad Karbalaye P. O. Box 11495-175 Tehran Iran email:karbalaye@yahoo.com 491

For Sale/Exchange: Offered for sale or exchange: Charaxes, Papilionidae and many more African lepidoptera. Numerous aberrations, sexual mosaics and gynandromorphs also available. List and pictures on request. Giancarlo Veronese, viale Venezia 138, 33100 Udine (Italia). gc.veronese@virgilio.it Fax: ++39/0432-232654. 491

Wanted: To buy or trade the following North American papilios: *P. p. palamedes; P. eurymedon, P. multicaudatus, P. oregonia.* Also Asian *P. ulysses* ssp., *P. p. paris* ssp., *P. memnon* tailed form and African *P. hornimanni, P. charopus.* Send offers to: Jorge R. Montero - Moreno P. O. Box 1913 -1000, San Jose, Costa Rica. 491

Wanted: Will pay cash for *Dynastes* hercules (18cm), *Titanus giganteus* (18 cm). Yoshiaki Furumi, 97-71 Komizo-Iwatsuki-Shi, Saitama-Ken 339-0003, Japan.

Miscellaneous

For Sale: 4 Lane Cornell style insect

Wanted: I will be donating a very large specimen collection to museums over the next several years. I desire a business partnership with person (or persons) with substantial Federal Income Tax obligation to make the donations under IRS 8283 Charitable Contributions Regulations and share the tax exemption. Confidentiality is assured, and absolutely no up front money or any kind of expenses involved. Serious inquires only. Carl Cook, Phone: 270-565-3795 or email: *bugman@scrtc.com* 491

Wanted: Donation papered of Lepidoptera, particularly tropical, singles or series welcomed, undetermined or not, but with data. Also interested in other "showy" insects. I am building a small museum for educational purposes. I may be able to help with postage but due to limited funds, donations of postage will be appreciated. Please contact: Jorge R. Montero-Moreno, P. O. Box 1913-1000, San Jose, Costa Rica. 491

Equipment

Light Traps: 12 VDC or 120 VAC with 18 inch vanes (15 & 32 Watt) and 24 inch (40 Watt). Rigid vanes of Stainless Steel, Aluminum, or Plexiglass. Rain Drains and beetle screens to protect specimens from damage. Collecting Light: Fluorescent UV 15, 32 & 40 Watt. Units are designed with the ballast enclosed in a weather tight cast aluminum enclosure. Mercury Vapor: 160 & 250 Watt self ballast mercury vapor with medium base mounts. Light weight and ideal for trips out of the country. Bait Traps: 15 inch diameter and 36 inches in height with a rain cloth top, nylon coated fiberglass screen, and supported with 3/16 inch steel rings. A plywood platform is suspended with eye bolts and S hooks. Flat bottom has a 3/16 inch thick plastic bottom that will

not wrap or crack. Bait container is held in place by a retainer. For more information, visit our web site at: <u>www.leptraps.com</u>, or contact Leroy C. Koehn, Leptraps LLC, 802 South Third Street, Watseka, IL 60970-1607: Tel: 815-515-4060 493

For Sale: Bioquip Tropical Net in
canvas bag. Reasonable offers accepted.P.F.Milner(828)877-5953pamilner@citcom.net493

Research

Research assistance needed - Drepanoidea

We are conducting a molecular phylogenetic analysis of Hook-Tip Moths and relatives (Drepanoidea) in order to understand the evolution of acoustic communication in drepanoid larvae. We are urgently needing live eggs or larvae of any species of Drepanidae (Drepaninae, Cyclidinae, Thyatirinae) or Epicopeiidae, but we are especially interested in obtaining larvae of Thyatirinae. Larval or adult specimens preserved in alcohol will also be appreciated. Tubes containing 100% ethanol will be provided if necessary. A small honorarium may be provided to anvone who can make a substantial contribution to the project. Please contact me (Jayne Yack) for additional questions.

Dr. Jayne Yack (Department of Biology, Carleton University, 1125 Colonel By Drive, Ottawa, Ontario, Canada K1S 5B6, jyack@connect.carleton.ca)

Akito Kawahara (Department of Entomology, University of Maryland, 4112 Plant Sciences, College Park, MD 20742, kawahara@umd.edu)



A Population Explosion of *Coloradia* pandora davisi Near Albuquerque in 2006 (Saturniidae: Hemileucinae)

Richard Holland

1625 Roma NE, Albuquerque, NM 87106 Speyerianokomis@aol.com

The year 2006, in the vicinity of Albuquerque, New Mexico, was marked by climatological extremes. Prior to 26 June, 2006, we received 0.31" precipitation for the preceding seven months. This was the third driest seven-month period on record. Commencing on the 26th of June torrential rains fell until the end of August resulting in one of the wettest summers record. Official on Albuquerque precipitation between June 26th and August 30th was 11.23" at our airport, and possibly twice that in the nearby Sandia Mountains. (Cloudcroft, New Mexico, received an astonishing 40" during this period.) This may or may not have caused successive outbreaks of about a dozen Lepidopterans. Species seen in unusual numbers included: Ethmia discostrigella (Chambers) (Oecophoridae: Ethmiinae), Choristoneura fumiferana (Clemens) (Tortricidae: Tortricinae). Choristoneura occidentalis Freeman, Melissopus latiferreanus (Walsingham) (Tortricidae: Olethreutinae), Orgyia pseudotsugata (McDunnough) (Lymantriidae: Orgviinae), Plataea trilinearia (Packard) (Geometridae), Malacosoma californicum (Walker) (Lasiocampidae), Glovera arizonensis Packard. Euscirrhopterus gloveri Grote & Robinson (Noctuidae: Agaristinae), Noctua pronuba (Linneaus) (Noctuidae: Noctuinae), Melanchra picta (Harris) (Noctuidae: Hadeninae). Egira variablis (Smith), Schinia Smith reniformis (Noctuidae: Heliothinae), Amphipyra pyramidoides Guenée (Noctuidae: Amphipyrinae), Euparthenos nubilis (Hübner) (Noctuidae: Catocalinae), Synedoidea (Grote) howlandi and other Synedoidea, Asticta victoria (Grote),

Melipotis indomita (Walker), *Coloradia pandora davisi* B & Benj. (Saturniidae: Hemileucinae).

Here we shall only discuss the last of the above. Coloradia p. davisi is a commercially significant pest which is capable of inflicting major injury on ponderosa pines (Pinus ponderosa Lawson). Like most members of the genus Coloradia. davisi is known to be biannual. It is fully possible that this species may pass several dry summers without emerging and wait for a wet year to emerge en mass. It is also probable that biennualism is a strategy to leave parasites and predators with no host on alternate years. The literature records other instances of population outbreaks of C. p. davisi. See, for example (Speer & Jensen 2003, Homan 1990, Richers 1985, Brown 1984, Gillogly & Moore 2006, Speer et al. 2001). The writer has anecdotal information anout a similar outbreak of this species two years earlier, in 2004, in the Sandia Mountains (fide Paul Opler).

There are numerous reports of Native Americans placing baskets under ponderosas to catch the pupae for food one such report actually made American Airlines official flight magazine's Cuisine Section (Homan 1991).

For what ever reason 2006 witnessed a massive outbreak of *C. p. davisi* in virtually the entire Albuquerque metropolitan area, especially including the Sandia Mountains. For several weeks during August, hundreds of individuals of this species could be seen every night at the headquarters of the Sandia Ranger District of the Cibola National Forest in the mountain community of Tijeras, New Mexico.

There were aggregations of this species at mercury vapor lights on this building, especially on those walls of the building facing north, where they are not disturbed by the rising or setting sun. Each morning large new masses of triangularly shaped green eggs could be seen pasted to the walls of the structure.

Literature Cited

- Brown, L.N. 1984. Population outbreak of Pandora moths (*Coloradia pandora* Blake) on the Kaibab Plateau, Arizona (Saturniidae). J. Lep. Soc. 38:65.
- Gillogly, K. & K. Moore. 2006. Fiscal Year 2002— 2006 Forest Monitoring Pandora Moth Outbreak, Fremont-Winema National Forest.
- Homan, J. 1991. They ate what? The Food Insects Newsletter 4(3):7—8 (first published in the Cuisine Section of American Way, official magazine of American Airlines).
- Richers, K. 1985. Population outbreak of Pandora moths (*Coloradia pandora* Blake) in the Mammoth Lakes Area, California. J. Lep. Soc. 39:338—339.
- Speer, J.H. & R.R. Jensen. 2003. A hazards approach towards modellng [sic.] Pandora moth risk. J. Biogeography 30:1899—1906.
- Speer, J.H., T.W. Swetnam, B.E. Wickman, and A. Youngblood. 2001. Changes in Pandora moth outbreaks during the past 622 years. Ecology 82:679—697.

Mailbag... Cont. from pp. 90

Florida, October 5-7, 2007, at the Doyle Conner Building and the McGuire Center, in conjunction with the Southern Lepidopterists' Society, with Dr. Andy Warren as coordinator (hesperioidea@yahoo.com). For further information regarding membership contact Peter Eliazar, Secretary-Treasurer, pjeatl@gmail.com updated visit our website or www.troplep.org.

J.D. Turner Executive Director, ATL *jdtatl@gmail.com* 44. Half-Moon Hairstreak (Satyrium semiluna maculadistinctum)

Butterfly Species Found During Annual Meeting in Bakersfield, California

Ken Davenport

6601 Eucalyptus Drive, #325, Bakersfield, California 93306-6856 flutterflies@juno.com

Below is the list for butterflies seen and/or collected at the Lepidopterist's Society meeting based in Bakersfield. Collecting and watching were done in the Piutes, Greenhorns, southern Sierra, Frazier Park and Mt. Pinos and in the high country east of Tioga Pass and along the east slope of the Sierra Nevada and Great Basin. While numbers of butterflies were low during field trips, over one hundred species were found. Special thanks to John Pasko, Steve Spomer, Paul Opler and many others for reporting records from the Yosemite region.

Skippers:

45. Behr's Hairstreak (Satyrium behrii behrii) 1. Silver-Spotted Skipper (Epargyreus clarus californicus) 46a. Sylvan Hairstreak (Satyrium sylvinus sylvinus) 2. Northern Cloudywing (Thorybes pylades indistinctus) 46b. Desert Hairstreak (S. sylvinus desertorum) 3. Nevada Cloudywing (Thorybes mexicana nevada) 46c. Dryope Hairstreak (S. sylvinus dryope) 4. Persius Duskywing (Erynnis persius) 47. Mountain Mahogany Hairstreak (Satyrium tetra) 5. Checkered Skipper (Pyrgus communis) 48a. Hedge-Row Hairstreak (Satvrium saepium saepium) 6. White Checkered Skipper (*Pyrgus albescens*) 48b. Southern Hedge-Row Hairstreak (S. saepium chalcis) 7. Northern White Skipper (Heliopetes ericetorum) 48c. Desert Mts. Hairstreak (S. saepium subaridum) 8. Alkaline Skipper (Pseudocopaeodes eunus eunus) 49. Great Basin Juniper Hairstreak (Callophrys siva chalcosiva) 9. Fiery Skipper (Hylephila phyleus) 50. Thicket Hairstreak (Callophrys spinetorum spinetorum) 10. Field Skipper (Atalopedes c. campestris) 51. Gray Hairstreak (Strymon melinus pudica) 11. Uncas Skipper (Hesperia uncas giuliani) 52. Marine Blue (Leptotes marina) 12a. Western Branded Skipper (Hesperia colorado idaho) 53. Western Pigmy Blue (Brephidium exilis) 12b. Western Branded Skipper (H. colorado fall flying entity) 54. Ceraunus Blue (Hemiargus ceraunus gyas) 13. Nevada Skipper (Hesperia nevada sierra) 55. Echo Azure (Celastrina echo echo) 14. Sonora Skipper (Polites sonora sonora) 56. Comstock's Blue (Euphilotes glaucon comstocki) 15a.Sandhill Skipper (Polites sabuleti sabuleti) 57. Pale Blue (Euphilotes pallescens) 15b. Tecumseh Skipper (P. sabuleti tecumseh) 58. Dotted Blue (Euphilotes enoptes) 16. Woodland Skipper (Ochlodes sylvanoides sylvanoides) 59. Melissa Blue (Plebejus melissa paradoxa) 17. Yuma Skipper (Ochlodes yuma yuma) 60. Greenish Blue (Plebejus saepiolis aehaja) **Swallowtails** 61. San Emigdio Blue (Plebejus emigdionis) 18. Clodius Parnassian (Parnassius clodius baldur) 62a.Boisduval's Blue (Plebejus icarioides icarioides) 19. Anise Swallowtail (Papilio zelicaon zelicaon) 62b. Eastern Sierra Boisduval's Blue (P. icarioides eosierra) 20a. Indra Swallowtail (Papilio indra indra) 62c. Evius Blue (P. icarioides evius) 20b. Phyllis' Swallowtail (P. indra phylisae) 63. Acmon Blue (Plebejus acmon acmon) 21. Western Tiger Swallowtail (Papilio rutulus rutulus) 64a. Clemence's "Lupine" Blue (Plebejus lupini monticola) 22. Two-Tailed Tiger Swallowtail (Papilio multicaudata pusillus) 64b. Green Blue (Plebejus lupini chlorina) 23. Pale Swallowtail (Papilio eurymedon) 65. Shasta Blue (Plebejus shasta shasta) **Sulphurs and Whites** 66. Veined Blue (Plebejus neurona) 24a. Pine White (Neophasia menapia menapia) 67. Sierra Nevada Arctic Blue (Agriades podarce cilla) 24b. Tehachapi Pine White (N. menapia tehachapina) 68. Heather Blue (Agriades cassiope cassiope) 25. Checkered White (Pontia protodice) **Metalmarks** 26. Western White (Pontia occidentalis occidentalis) 69a.. Cythera Metalmark (Apodemia cythera cythera) 27. Cabbage White (Pieris rapae) 69b. Cythera Metalmark (A. cythera? Mt. Pinos on Eriogonum 27. Large Marble (Euchloe ausonides transmontana) umbellatum) 29. Clouded Sulphur (Colias philodice) **Brushfooted Butterflies** 30. Orange Sulphur (Colias eurytheme) 70. Gulf Fritillary (Agraulis vanillae incarnata) 31. Harford's Sulphur (Colias harfordii) 71. Coronis Fritillary (Speyeria coronis hennei) 32. Sierra Sulphur (Colias behrii) 72a. Zerene Fritillary (Speyeria zerene monticola) Hairstreaks, Coppers and Blues 72b. Malcolm's Fritillary (S. zerene malcolmi) 33. American Copper (Lycaena phlaeas alpestris) 73a.Macaria Callippe Fritillary (Speyeria callippe macaria) 34. Lustrous Copper (Lycaena cupreus lapidicola) 73 b. Unsilvered Macaria (S. callippe laurina) 35a. Tailed Copper (Lycaena arota arota) 74. Egelis or Great Basin Fritillary (Speyeria egleis egleis) 35b..Nevada Tailed Copper (L. arota virginiensis) 75. Hydaspe Fritillary (Speyeria hydaspe viridicornis) 36. Great Copper (Lycaena xanthoides xanthoides) 76a., Mormon Fritillary (Speveria mormonia mormonia) 37. Edith's Copper (Lycaena editha editha) 76b. Glass Mountain Fritillary (Speyeria mormonia obsidiana) 38. Gorgon Copper (Lycaena gorgon gorgon) 77. Sierra Meadow Fritillary (Boloria epithore sierra) 39a. Blue Copper (Lycaena heteronea probably clara) 78. Northern Checkerspot (Chlosyne palla) 39b. Blue Copper (L. heteronea submaculata) 79. Whitney's Checkerspot (Chlosyne whitneyi) 40. Ruddy Copper (Lycaena rubidus monachensis) 80. Hoffmann's Checkerspot (Chlosyne hoffmanni hoffmanni) 41. Purplish Copper (Lycaena helloides helloides) 81a. Field Crescent (Phyciodes pulchella, southern Sierra segregate) 42. Mariposa Copper (Lycaena mariposa mariposa)

Continued on pp. 99

43. Golden Hairstreak (Habrodais grunus grunus)

Additional Notes on the Altai Mountains and Wind River Range Butterfly Faunas

Steve Fratello

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Spurred on by writing the recent manuscript concerning these magnificent Holarctic montane regions (NEWS Vol. 49, Summer), I put a few years of procrastination aside and finally obtained a copy of Tuzov et al.'s great work, "Guide To The Butterflies of Russia And Adjacent Territories, Volume 1". In correspondence, Oleg Kosterin commented "Tuzov's book is a bible of all Palaeartic lepidopterists now, although not free of natural errors" and later commented that he was very surprised I was able to buy this book so many years after it was published, as it now is a very difficult to obtain work.

After looking at and studying this book with relish for many months, I will put forth a few items that directly or indirectly bear on what I had written previously. In regards to the genus *Erebia*, which was mentioned a couple of times in regards to the Altai Mts fauna, the staggering variety of no less than 18 species are to be found in this great Central Asian mountain range: E. cyclopius Eversmann, E. edda Menetries, E. embla Thunberg, E. disa Thunberg, E. medusa Dennis & Schiffermuller, E. rossi Curtis, E. aethiops Esper, E. neriene Boeber, E. ligea Linnaeus, E. jeniseiensis Trybom, E. kefersteini Eversmann, the endemic E. kindermanni Staudinger, E. maurisius Esper, E. theano Tauscher, E. turanica Erschoff, E. callias Edwards, E. pandrose Borkhausen and E. fletcheri Elwes. What does this mean in comparative terms? The 18 Altai Erebia species represents several more species in number than the total number (approx. 13) of Erebia species found in the entire Nearctic region! It also represents several more species in number than the entire satyrine fauna

(13 or 14 species) found in the Wind River Range; the Wind River Range being one of the Nearctic region's greatest areas for satyrine diversity!

In the previous manuscript, I erroneously reported Coenonympha sunbecca Eversmann as endemic to the Tian Shan Mts. According to the Tuzov volume, the species occurs more widely in the Central Asian mountains, "from Ghissar to Tarbagatai". In the previous manuscript, I also stated that though the nomenclature I used for the Wind River Range fauna might not reflect the most recent revisions, it would be no problem to understand which taxa I referred to. Though this certainly remains true, it will be best to mention the latest revision concerning the species Erebia theano Tauscher. According to the Tuzov volume, E. theano is a Palaearctic species restricted to the "mountains of S. Siberia and Mongolia". What were for the longest time considered Nearctic races of E. theano, are now combined with E. pawlowskii Menetries; which accounts for E. pawlowskii being a Holarctic species of very widespread range. Besides the Tuzov volume, a number of recent Nearctic lepidoptera works have reflected this new taxonomy and nomenclature.

Lastly, at our annual meeting in Bakersfield, Dr. Karolis Bagdonas, an expert on the lepidoptera and natural history of northwestern Wyoming, informed me further concerning *Boloria improba harryi* Ferris. Besides the colonies in the Wind River Range, expeditions from the Field Research Station into the remote, high Absarokas (northeast of the northern reaches of the Winds) have uncovered fairly extensive populations of *B. improba harryi* in the arctic/alpine

zone. A great discovery in this modern age and not at all diminishing the Wind River Range's moniker, "Kingdom of *Boloria*"!

Author's Note: Fellow Russian lepidopterist Oleg Kosterin once again gave me some additional information to make this manuscript more accurate. What follows is further knowledge concerning Altai Mts *Erebia* taken from notes Oleg sent me in e-mail correspondence.

1. From the range given in the Tuzov volume, "..., the Urals and S. Siberia to the E. Amur region, N. China and N. Mongolia", I inferred that E. medusa was resident in the Altai. Oleg was himself interested in whether this species occurred in the Altai but failed to find any specimens or records. Oleg thought the lack of specimens or records of E. medusa from the Altai a bit strange, as he noted the species is common in the steppes of Khakasia east of Altai. He also noted that in a huge city like Moscow with all its butterfly lovers, there existed the possibility of records of E. medusa from Altai but doubted it.

2. According to the Tuzov volume, *E. turanica* is found in "Mountainous areas from the S. Altai to N. Tian-Shan." Oleg, after a special consultation with Dr. Vladimir Lukhtanov, a great expert on the butterflies of the S and W Altai, states that "*E. turanica* is a Central Asian species and certainly does not occur in the Altai."

3. Oleg included an Altai *Erebia* species I didn't mention, *E. stubbendorfii* Menetries. In the Tuzov volume, *E. stubbendorfii* is mentioned under *E. maurisius* as either a race of that species or a distinct species, a conclusion awaiting furthur studies. Oleg states its definite species status, its range as the Altai and Sayan Mts, it being most closely related to "its eastern vicariant E. pawlowskii" and sometimes being found sympatric with E. theano. This summer, Oleg photographed E. stubbendorfii during an expedition to the Altai's Katunskii Range. Hopefully another Altai Erebia will appear on Oleg's fantastic web-site soon.

With the additional information provided by Oleg, the minimum number (could also be total species count) of *Erebia* species for the Altai is seventeen species. As before, an incredibly diverse Holarctic fauna!

References

- Opler, P. & Warren, A. 2006. Lepidoptera of N. America 4. Scientific Names List for Butterfly Species of N. America, north of Mexico. Contributions of the C. P. Gilette Insect Biodiversity Museum, Dept. of Entomology, Colorado St. University. Sofia, Bulgaria: Pensoft.
- Scott, J. 1986 The Butterflies of North America. A Natural History and Field Guide. Stanford: Stanford University Press.
- Tuzov, V. (Ed.) et al. 1997. Guide to the Butterflies of Russia and Adjacent Territories, Volume 1. Hesperiidae, Papilionidae, Pieridae, Satyridae. Sofia, Bulgaria: Pensoft.

Acknowledgements

I thank V. Tuzov, his colleagues, his predecessors and all who contributed to their exquisite horizon-broadening, beautiful work concerning Palaearctic butterflies. Thanks to explorer/scientist/naturalist/lepidopterist Oleg Kosterin, expert on Russian butterflies, especially of Siberia, who once again helped me to write a more accurate manuscript. Thanks also to Karolis Bagdonas and his colleagues at the Field Research Station whose ongoing hard work has led to amazing discoveries and great knowledge concerning the incredible lepidoptera fauna of northwestern Wyoming. I always will appreciate the warmth and passion whenever I have had personal conversations with Karolis.

Bakersfield

Cont. from pp. 87

Alturas California, near the Warner Mountains, next year. After a rousing performance of thanks by the students, all parted with plans to meet at Mississippi State next summer for the annual meeting.

Every aspect of the meeting went smoothly and demonstrated that an individual can still host a meeting at this level. Many people made a point to thank the host, Kelly Richers, and his many assistants, for a job well done.

On Sunday evening, over thirty moth collectors and studiers met on Mount Pinos for a concluding evening of blacklighting. The quiet evening, with variety of different a moths cooperating, made a great finish to the meeting.

Announcement

The University of Nevada Press announces the release of "Moth Catcher" by Michael M. Collins, available in September, 2007. The author traces his study of natural hybridization and speciation in saturniid moths, using both a personal narrative of western and southwestern natural history, and a more formal presentation of speciation and species concepts, but in a manner appropriate for the amateur naturalist.

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Butterfly Species Found During Annual Meeting in Bakersfield

Continued from pp. 97

- 81b. Mountain Field Crescent (Phyciodes pulchella montanus) 82. Mylitta Crescent (Phyciodes m. mylitta)
- 83a. Olancha Checkerspot (Euphydryas chalcedona olancha) 83b. Ireland's Checkerspot (Euphydryas chalcedona irelandi)
- 83c.Sierra Checkerspot (Euphydryas chalcedona sierra)
- 84. Anicia Checkerspot (Euphydryas anicia variicolor)
- 85a. Edith's Checkerspot (Euphydryas editha nr. augusta)
- 85b. Cloud-Born Checkerspot (Euphydryas editha nubigena)
- 86. Zephyr Anglewing (Polygonia gracilis zephyrus)
- 87. American Painted Lady (Vanessa virginiensis) 88. Painted Lady (Vanessa cardui)
- 89. West Coast Lady (Vanessa annabella)
- 90. Red Admiral (Vanessa atalanta rubria)
- 91. Buckeye (Junonia coenia grisea)
- 92a. Lorquin's Admiral (Limenitis lorguini lorguini)
- 92b. Lorquin's Admiral (Limenitis lorquini pallidafacies)

- 93. Weidemeyer's Admiral (Limenitis weidemeyerii latifascia)
- 94. California Sister (Adelpha californica)
- 95. California Ringlet (Coenonympha california california)
- 96. Mono Ringlet (Coenonympha ampelos mono)

Note: Many combine californica and ampelos under Coenonympha tullia complex.

- 97. Walker River Wood-Nymph (Cercyonis pegala walkerensis)
- 98a. Behr's Wood-Nympha (Cercyonis sthenele behrii)
- 98b. Little Wood Satyr (Cercyonis sthenele paulus)
- 99. Small Wood-Nympha (Cercyonis oetus oetus)
- 100a. Ivallda Arctic (Oeneis chryxus ivallda)
- 100b. Stanislaus Chryxus Arctic (Oeneis chryxus stanislaus)
- 101. Monarch Butterfly (Danaus plexippus)
- 102. Queen (Danaus gilippus thersippus)

A Bilateral Gynandromorph of *Celastrina neglecta* (Lepidoptera: Lycaenidae: Polyommatinae)

Karl R. Gardner

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The discovery of this specimen, is the fortunate intersection of two activities. After moving to my property 35 years ago, I created a series of Riker mounts of local butterfly species found during each month of the butterfly year. I hang the approriate mount by the front door and at the beginning of each month I switch mounts. For the past several years I also keep a daily record of species seen.

On September 7, 2006 I had just returned inside from recording species for the day and noticed I had seen two species not in the September mount. I went back outside to find a *Celastrina neglecta* and a *Polygonia comma*. As I stepped off the porch, a neglecta flew by. My unprepared swing missed. I walked fifty feet up the yard and saw another

on the wing, which I successfully captured. I put it in a viewing jar and held it up to the light to check the sex. Because they rest with wings closed, I looked at the width of the dark marginal band showing through the back lit butterfly. It was wide, so I 'knew' it was a female. Since I was planning on collecting a male for the Riker mount I almost released 'her', but not knowing how long it might take to find a male, I kept it. The abdomen was bent, but I did not realize the significance at the time. I took the jar inside and put it in the freezer. More searching did not turn up a comma.

That evening I took the specimen out of the freezer and after allowing time to thaw, I picked it up with forceps and squeezed the thorax in preparation for spreading. I looked at the right dorsal side and was surprised to see it was a male. I thought that was odd. Then I rotated the specimen and realized it was a gynandromorph! (See photos pp. 101)

September is late here for *neglecta*, but I have found them ovipositing on hog peanut (*Amphicarpa bracteata*) which grows at my porch and elsewhere on the property and have reared eggs and larvae to adults which eclosed in September. The hog peanut plants came with the property, but I added additional plants by the porch and elsewhere in order to have *Epargyreus clarus* larvae to show visitors and to use for show and tell at butterfly walks. The specimen is now in my personal collection.

Announcement

The Wedge Entomological Research Foundation, Inc. announces a special introductory price of \$ 75.00 for its newest book, *THE HAWK MOTHS OF NORTH AMERICA, A Natural History Study of the Sphingidae of the United States and Canada*, by James P. Tuttle. ISBN 978-0-9796633-0-7. After 1 November 2007, the retail price will be \$90.00.

This is the first publication by the Wedge Foundation that is not part of the Moths of America North of Mexico (MONA) series. This book will be hardbound in cloth with a paper dust

jacket. The books will be shipped before the end of 2007.

The Wedge Entomological Research Foundation, Inc. is long known for its Moths of America North of Mexico series of publications . The high standards of scholarly work and production qualities are maintained in this new book. The peer reviewed book will be printed on acid free paper. Features of the book are; 1) Treats the 127 sphingid taxa recorded from North America, 2) Color illustrations of adults and larvae, 3) Hardbound with dust jacket, 4) Printed on 8.5 " X 11 " acid

free paper, 5) Approximately 300 printed pages, 6) 19 Color plates of adults and larvae, 7) 70 figures, and 30 maps.

For information about ordering this book at the Special Introductory Price, please visit this web page www.wedgefoundation.org and click on the link to News, or please write to Wedge Entomological Research Foundation, Inc, Hawk Moths of North America. 9417 Carvalho Ct., Bakersfield CA 93311-1846 USA, (661) 665-1993, or send an email to metzlere@msu.edu





Figure 1. Bilateral gynandromorph of *Celastrina neglecta*, dorsal view. From: USA: Pennsylvania: Berks County: 8 miles SE of Fleetwood, 7-IX-2006, Karl R. Gardner. Figure 2. Bilateral gynandromorph of *Celastrina neglecta*, ventral view. See article opposite page.

Bahamian Swallowtail larvae on northern Key Largo



Figures 1-3. Early instar larvae of *Heraclides andraemon* spp. on Key Largo, 2 June 2007. (Photo Credits: H. L. Salvato) See article on pp. 91.



A striking albinic Euphilotes spaldingi

Todd Stout of the Utah Lepidopterists' Society sent photos of this remarkable albinic male *Euphilotes spaldingi* which he reared. As Todd put it "it is basically a white butterfly with blue irridescence." Photos 1, 2 are normal *E. spaldingi* to use as comparison to the startling albinic specimen in photos 3 and 4.

Full data is as follows: *Euphilotes* spalidingi male albinic form; ex larva 30 Sept. 2006 on *Eriogonum* racemosum; Emerged 21 Aug. 2007; 1.6 miles West of Mt. Olympus, west side Wasatch Mountains, UT: Salt Lake County, Todd L. Stout leg.

Volume 49, Number 3

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

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

Submission Deadlines

Material for Volume **49** must reach the Editor by the following dates:

Date	Due
	Date

4 Winter

Issue

Immediately!

Reports for Supplement S1, the Season Summary, must reach the respective Zone Coordinator (see most recent Season Summary for your Zone) by Dec. 15. See inside back cover for Zone Coordinator information.

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Images from Lepidopterists' Society Members....











1) Zale minerea, photo: Gary Anweiler; 2) Bark painting of a butterfly from Australia. This painting was done by artist Nyuka Marawili, a member of the Yolngu Aboriginal People in the Yilpara homeland of eastern Arnhem Land. It is on a piece of bark from the stringy-bark tree (Eucalyptus tetrodonta), measuring 21 cm by 48 cm, and the paints are iron ochres and other natural materials. As in many indigenous cultures, images of insects and animals are often highly stylized (not anatomically correct), and butterflies symbolize immortality or reincarnation of human souls. It was purchased by Ric Peigler in Australia in July 2006. 3) *Chrysoteuchia topiaria*, July 4 2007, Edmonton Alberta, Photo:Gary Anweiler; 4 -5) Dorsal and ventral of aberrant *Papilio zelicaon*, 1998-5-1, Ellison Ridge, Winfield, British Columbia. Photos: Norbert Kondla.6) Kelly Richers and Jerry Powell at the annual meeting in Bakersfield, CA. 7) Current President John Acorn, net in hand.



