Volume 44, Number 2 Summer 2002

NEWS OF THE LEPIDOPTERISTS' SOCIETY

THE LEPIDOPTERISTS' SOCIETY
EST. 1947

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Inside: Butterflying Venezuela, Forgotten Lepidopterists, Pipevines, Social Butterflies, UV Reflections, Data Sharing, Meet the Alberta Lepidopterists, Sphingids in Flight, Queens, ...and more!

NEWS OF THE LEPIDOPTERISTS' SOCIETY

Volume 44, No. 2 Summer 2002

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Cover: First, Moths, 2001 Photo Contest: *Automeris egeus*, by Leroy Simon.

The Lepidopterists' Society is a non-profit educational and scientific organization. The object of the Society, which was formed in May 1947 and formally constituted in December 1950, is "to promote internationally the science of lepidopterology in all its branches; to further the scientifically sound and progressive study of Lepidoptera, to issue periodicals and other publications on Lepidoptera; to facilitate the exchange of specimens and ideas by both the professional worker and the amateur in the field; to compile and distribute information to other organizations and individuals for purposes of education and conservation and appreciation of Lepidoptera; and to secure cooperation in all measures" directed towards these aims. (Article II, Constitution of The Lepidopterists' Society.)

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Butterfly Watching in Venezuela with Andrew Neild, Oct/Nov, 2000

Peter Bruce-Jones

18 Old Brickfields, Broadmayne, Dorchester DT2 8UY, U. K.

For those with an interest in butterflies Venezuela is surely the epitome of the tropical paradise. The diversity of types here is legendary. Compared with Britain's total of 58 species, and 440 for the whole of Europe, Venezuela can boast over 2800. Even to those with no such interest, the giant blue *Morpho* butterflies of South America are a familiar image, whether from museums or their frequent use as advertising symbols. The forest where they live is seen as a place of mystery and magic, a sense perhaps heightened by it being the setting for Conan Doyle's famous novel *The Lost World*, and modern day environmental concerns have given it iconic status.

So it was with considerable excitement that I, and seven other keen butterfly watchers, joined a trip led by Andrew Neild, the acknowledged authority on the butterflies of the country. Like most of the group I had not really penetrated Neotropical rain forest before. Visits to the peripheries of the region in Argentina and Mexico in previous years had acted as something of an appetiser, but were to prove meagre fare compared to the main course...

Arrival and first impressions

The group gathered in a hotel in Caracas on Sunday evening having arrived on a variety of flights from Europe, and the trip began in earnest early the next morning. "Early" meant a 3:45 am wake-up call for a 6:00 am internal flight—this was not to be a holiday of putting ones feet up!

Our first destination was the eastern foothills of the Andes and the flight gave us our first views of the forested landscape. Sunshine greeted our arrival at Santo Domingo and camera gear was eagerly prepared for use whilst the luggage was loaded onto our minibus. Despite the early hour a few butterflies were active around the edge of the airport and we recognised a *Heliopetes* sp. and a *Calycopis* sp. Hurry, hurry to the forest...!

After about half an hour's drive we arrived at the El Tama National Park and the Rio Frio. Unlike those at home this fast flowing river hurtles down a boulder-strewn bed in a torrent of white water even when the water level is low, with seemingly no sections of calm water at all. The steep banks are covered in dense rain forest, through which our dirt road has been cut parallel with the river, and the sound of rushing water is never far away. Heading upstream it was not long before we encountered our first butterflies. The first few, such as *Heliconius erato*, *Heraclides thoas* and *Rekoa meton* had a degree of familiarity for me, but very soon the exotic imposed itself—our first *Morphos* and a "White" that is actually black (*Archonias tereas*)! Onward!

The Andes—Rio Frio

Thus began the first of three tremendous days at this very rich site. The forest is too dense to depart from the track so we spread ourselves out and wandered up and down it, always with an ear open to Andrew's announcements of particularly interesting species and his expert identifications. The *Lantana* and *Heliconia* flowers, among others, were host to nectaring butterflies, particularly various *Heliconius* and *Eurybia* species, respectively. On damp areas of the road a variety of species were to be found "mud-puddling," sucking up much needed salts from the wet surface. Highlights on the first morning included an immaculate and very docile Southern Daggertail, *Marpesia petreus*, the stunning *Heliconius antiochus* and a gorgeous large vivid orange skipper with transparent wing patches, *Myscelus amystis*.

Periodically a giant blue *Morpho* (we saw five species here) would flap its leisurely way along the track. They have a very slow lazy wing beat, which with the bright shiny metallic blue of the upper wings makes them appear more like part of a child's bedroom mobile that has escaped than a living insect.When we were lucky it was the male of *Morpho rhetenor*, which with its all-over blue on top is surely a contender for the title "most spectacular butterfly in the world." We were fortunate enough to see the huge female of this species in flight (hotly pursued by Andrew gesticulating wildly and extolling its virtues), its orange and brown coloration contrasting strongly with that of the male.

The forest is also rich in birds, although these are harder to see through the dense tree canopy. A pair of Yellow-tufted Woodpeckers were found nesting in a dead tree and various Tanagers were seen, most notably the rich red Crimson-backed Tanager and the beautiful pale blue Swallow-Tanager. There were also hummingbirds here but they move so quickly that usually they were heard rather than seen, or just

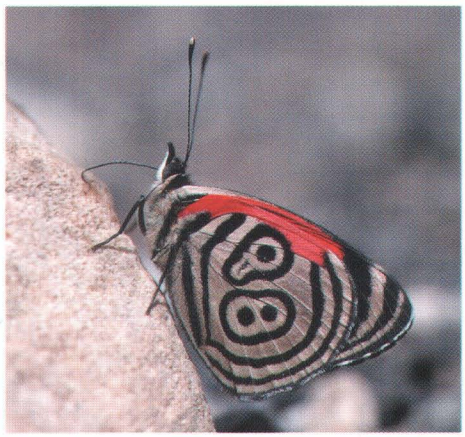
continued on pp. 42

First of Two Parts. To be continued in the next issue of the News.



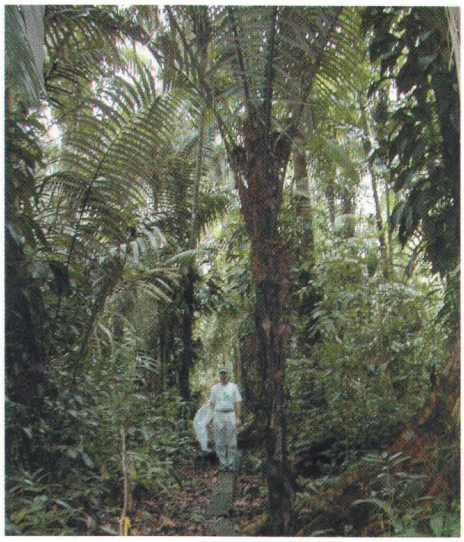


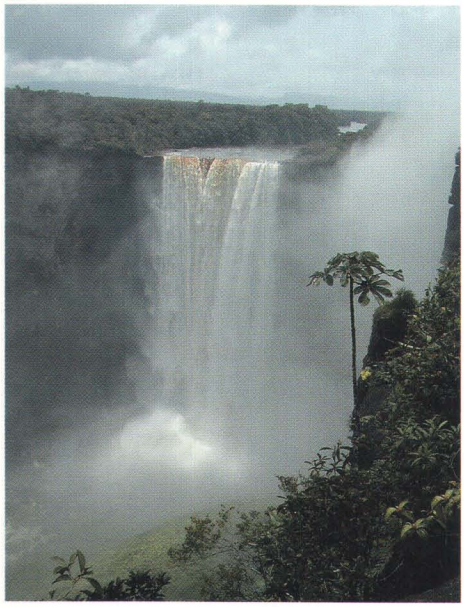


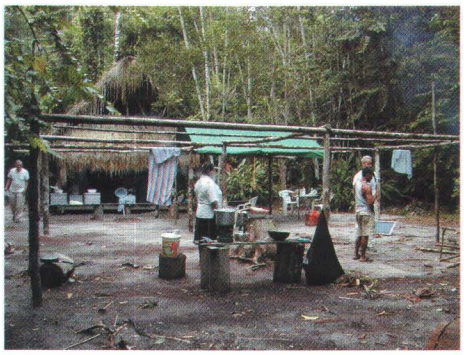



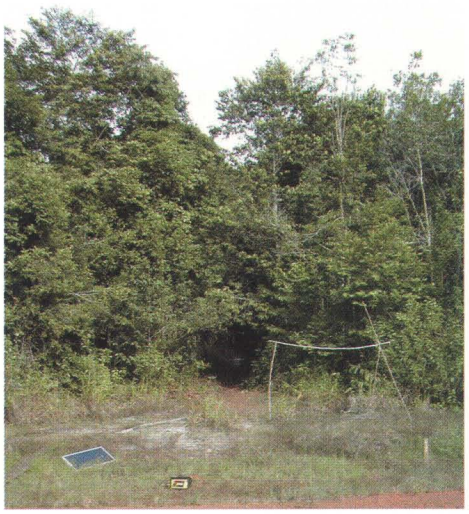
Venezuelan Butterflies...

1. *Marpesia petreus petreus* male at Rio Frio; **2.** *Heliconius antiochus aranea* on *Lantana*, Rio Frio; **3.** *Colobura dirce dirce* puddling at Rio Frio; **4.** *Protographium agesilaus agesilaus* at Rio Frio; **5.** *Antirrhea ulei venter* in cloud forest at the top of La Escalera; **6.** *Adelpha cytherea nahua*, Rio Frio; **7.** *Battus chalceus ingenuus* male puddling at Rio Frio; **8.** *Diaethria marchalii dodone* on the La Revancha road. All photos by Peter Bruce-Johns. See the story, part 1 of 2, beginning on pp. 3. *(There will be more of the author's beautiful photos with part 2 of the travelogue—Ed.)*









Lepidopterists in Guyana: Biodiversity Project Trip

February 4 to March 4, 2002, Don Davis, Mike Pogue, and Alma Solis. Funded by the Smithsonian Institution Guyana Biodiversity Project. Photos by Alma Solis.

Left (top to bottom): M. Pogue at CEIBA Biological Station east of Georgetown; Kaiateur Falls (2× longer than Victoria Falls, and 5× longer than Niagara Falls), a one day plane excursion, collecting prohibited.

Center (top to bottom): Whitewater Camp, Iwokrama Forest, D. Davis, Joyce (cook), Ovid Allicock (Ranger) and M. Pogue; Near Corkwood Swamp Camp, Iwokrama Forest, sign indicates Amerindian Districts adjoining Forest; Behind Corkwood Swamp Camp, Iwokrama Forest, visited by monkeys, macaws, and riodinids; Labba Lodge, Shanklands (nr. Bartica on the Essequibo River), M. Pogue and Jackie Argoon (University of Guyana student)

Right (top to bottom): Getting ready to leave Whitewater Camp, Iwokrama Forest by boat, M. Pogue and our captain; Muri Scrub Camp, Iwokrama Forest, M. Pogue and D. Davis spreading moths; Muri Scrub Camp, Iwokrama Forest, by the road recharging battery with solar panel

Venezuela...*cont'd from pp. 39*

flashed by too fast to determine the species. On a smaller scale, there were some spectacular dragonflies—I particularly liked one with a blood-red head and thorax contrasting with a pale powder blue abdomen.

After a very pleasant picnic lunch prepared by our local guide, Alejandra, and driver, Pipo, the clouds started to gather, reducing the number of butterflies to be seen. A little later the first day's photography was brought to a somewhat premature end by some heavy rain and we repaired to the comfortable Hotel Dinastia in the mountain city San Cristobal, our home for the next five nights. However, the second day alongside the Rio Frio was truly wonderful, easily my best single day's butterfly photography anywhere to date.

The previous day's rain seemed to have brought out more butterflies many of them "mud-puddling" like the zebra-striped *Colobura dirce*, the black "White" *Archonias tereas*, the giant swallowtail *Heraclides thoas* and the spectacular swordtails *Eurytides dolicaon* and *Protographium agesilaus*, both of which allowed a very close approach with the camera. Normally flighty species such as the common but beautifully coloured *Anartia amathea*, the fast-flying *Adelpha cytherea* and *A. malea*, and the smaller *Hypanartia lethe*, posed on leaves for pictures. With a little patience I was pleased to be able to photograph the giant sulphur-coloured *Phoebis philea*.

Rotting bananas placed on the first day had attracted giant *Caligo idomeneus* and *C. atreus*, crepuscular species, and more bait was set which brought us *Morpho menelaus* and *M. peleides*. Another highlight was *Doxocopa laurentia chlorotaenia*, dark brown with iridescent blue and white flashes across both wings changing shade with the angle of the light. Near the warden's hut was a striking scarlet and black *Callicore pitheas*—strangely only one other *Callicore* was seen all trip. Notable bird life included the Orange-crowned Oriole and the Black-crowned Tityra.

The day climaxed with Andrew showing us the rarely seen tiger-patterned Papilionid *Pterourus zagreus* and we were surprised to learn how it smells strongly of vanilla! It looks unlike the other Papilionid (swallowtail) butterflies, bearing the "tiger" pattern more characteristic of various poisonous Ithomiid and Danaid butterflies. Mimicry is a notable feature of the South American butterflies and we were to see many examples on this trip.

The site was well worth more time and after our two days at higher altitudes we returned for a third day here; this time concentrating on sites further up the track, away from the main river valley. This is reached via a suspension bridge over a tributary valley. Several *Morphos* were again present at bait placed on our earlier days here, and were now joined by the spectacular *Prepona eugenes* and two species of *Archaeoprepona*. A few of us had the pleasure of seeing a *Morpho menelaus* basking open-winged, and a high-flying crimson banded *Agrias claudina*, both sadly out of range for photography. Damp patches in the road were productive as usual, the stars this time being *Battus chalceus*, another *Pterourus zagreus* and a Sugar Cane Borer Moth, *Castnia licoides*, a type on the disputed border between butterflies and moths. A couple of lucky members of the party managed to photograph the pale electric blue Riodinid *Lasaia agesilas*.

Heavy showers, requiring us to retire to the bus, broke the earlier part of the day and an early lunch was taken in the shelter of the eaves of the warden's hut. Rain doesn't seem to stop the birds' activity and during lunch we were treated to the superb sight of a pair of Multi-banded Aracaris (similar to Toucans) plus a Mountain Cacique, a Magpie Tanager, various Orioles and a group of Thick-billed Euphonias. After the rain the conditions were even more humid than usual, and our profuse sweat attracted a *Catonephele numilia* to ride on our shirts back to the bus!

The Andes – Higher altitudes

From the base at San Cristobal we were also able to explore the cloud forest higher up the Andean slopes for different species. On the third day we took a chance on the weather and followed the Delicias road to Mata Mula. The morning was cloudy and few butterflies were active but a couple of stops beside the main road allowed us to see a splendid display of orchids and we also saw the beautiful pierid *Lieinix nemesis*. One of the few caterpillars of the holiday was here, one of the *Pedaliodes* species. The clouds did have proverbial silver linings since soon it was time to abandon the bus and take to our feet up the steep Mata Mula track itself, reaching an altitude of 1900m. In sun this would have been rather more uncomfortable! Even under cloud it was hard keeping up with the agile Andrew as he sought the exotic for us. The few butterflies encountered were at least very docile, and included the colourful satyrid *Oxeoschistus puerta* and a basking *Siproeta epaphus*.

We recovered our energy over a leisurely lunch beside a radio mast. The hut walls here were host to some splendid hawk moths that would dwarf anything known in Europe. Then in steadily brightening weather we continued to climb slowly, craning our necks as Andrew pointed out new species high in the canopy. As the sun broke through the cloud several red and yellow-banded *Heliconius clysonymus* delighted us with their presence, and we soon came upon basking males of *Dismorphia medora* and some clearwing Ithomiid butterflies, including *Oleria santineza*, nectaring. A delightful little Lycaenid, *Lamprospilus nicetus*, and the vividly yellow black and green *Perisama oppelii* were among the other finds.

Bird of the day had to be the sparkling Beryl-spangled Tanager, really living up to its name. High in the trees various *Adelpha* species were flying, plus some

large dark and fast-flying *Pyrrhopyge* skippers. As Andrew tried to catch one of these for closer inspection he dislodged a beautiful orange and white moth (much later identified as *Pityeja histrionaria*) that fell to earth. We posed it on a stump as the finale to another most enjoyable but tiring day.

The following day found us heading for the cloud forest again on another steep road to San Vicente de La Revancha, albeit at 'only' 1400-1600m. This valley is progressively being cultivated with coffee and we were much less in the 'wilds' here but there was plenty to see. A wide variety of species were basking or getting salt on the sun-baked road surface, and most of us spent the first part of the day trying to photograph the "89 Butterfly," *Diaethria marchalii,* and no less than five species of *Perisama*. Patience was needed to get photographs of the curious skipper *Theagenes albiplaga* which was forever on the move, flying very low and rapidly over the road in figure-of-eight patterns.

Gorgopas chlorocephala, virtually black all over but with a metallic green head and upper thorax, was more docile. Andrew managed to find us both sexes of the spectacular riodinid *Necyria saundersi*, and a rarely encountered female of the giant sulphur *Phoebis rurina*. I particularly enjoyed the splendid opportunities to photograph the striking chocolate-and-white daggertail *Marpesia zerynthia*, and another black "white" *Pereute leucodrosime*, the latter embellished dorsally with patches of chalky blue and red.

After our exertions and an excellent paella supper we were glad that the title of tonight's "Discoteca Insomnia" at the hotel didn't prove prophetic!

South of the Orinoco Delta: Imataca Forest

Time to leave the Andes. Two flights brought us to the northeastern city of Puerto Ordaz, on the Orinoco River, where we met our new guides Billy and Oscar. Having got used to the relative cool of the Andes we began to wilt in the baking heat here, but soon we were on the move again by road to our next resting place, the fairly basic Parador Taguapire guesthouse at El Palmar. This was described in the flyer for the tour as "simple, rustic" – very true! We drove mostly through cattle-farming land, but it was once all forest. On arrival in El Palmar we quickly sortied to see what we could find as the sun dipped rapidly. Tree trunks in a small copse were host to a few Cracker butterflies, *Hamadryas feronia*, and the crepuscular *Caligo* were starting to fly. We also found the wings of a spectacular lycaenid (*Evenus sp.*?). However, it was a bird, a Black-necked Aracari, which stole this show.

The village of El Palmar is close to the Imataca Forest Reserve, consisting of wet tropical lowland rainforest on the southern edge of the Orinoco Delta. This is quite a different, somewhat drier, habitat to the mountainous country of the Andes, and with it come different groups of butterflies. Our first day's butterflying here seemed very slow compared to the feast at Rio Frio. Numbers of butterflies were far lower, but thanks largely to the banana bait some interesting types were seen, including *Hypna clytemnestra*, *Prepona laertes* and the rarely seen Brassolid *Selenophanes cassiope*. A narrow trail into the darkness of the forest was more productive, and also yielded a rare small frog related to the arrow-poison types (*Allophryne ruthveni*).

Seven species of *Morpho* were encountered at Imataca, *M. rhetenor* having to share some of the glory with *M. adonis* and *M. telemachus*. Rhetenor had the last word though when a captured male released from storage in the coolbox opened its wings for us as it warmed up on one of the bananas. As if this wasn't spectacular enough, a brief stop next morning at a remnant of forest in a cleared zone gave us a sight of the iridescent green multi-tailed lycaenid *Arcas imperialis*. One member of the party declared he had just fallen in love! At this same spot was a tree whose lower trunk was almost encased in a mass of large gregarious hairy caterpillars, species (or even family!) unknown. Other types worth a mention here were *Heliconius wallacei*, the brightly coloured satyrids *Euptychia cephus* and *E. tricolor*, and the Green hairstreak-like *Mesacyanophrys janias*.

This was a very good site for dragonflies including some spectacular very spindly giant damselflies with a curious dainty flight. The relative silence was punctuated by the call of the Screaming Piha, a characteristic 'sound of the forest' but these birds are very hard to see. We were lucky enough, however, to see Long-tailed Tyrants and Paradise Jacamars flying together over a small pond, and on the drive back to El Palmar we disturbed several Nightjars. Early on the second morning there were plenty of birds around the guesthouse. Lesser Kiskadees provided the bulk of the dawn chorus, supplemented by other flycatchers and Tanagers, and both Blue-headed and Orange-winged Parrots. A Blue-tailed Emerald hummingbird was visiting flowers in the guest house garden. On our return to the forest Helmeted Curassows flew over, but unfortunately the Harpy Eagle continued to elude us. So too, not surprisingly, did any Jaguars, but Oscar found fresh prints of a mother and cub.

Continued in the next News...

Calendar:

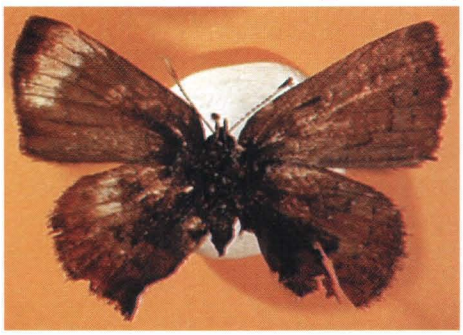
VIIth European Congress of Entomology

7-13 October 2002, Thessaloniki, Greece. Official language of the conference will be English. Registration form, program, and information about Thessaloniki (second largest city in Greece) is available online at ***www.helexpo.gr/ece***

An Aberrant *Euphydryas chalcedona*

An amazing aberration of the Chalcedona Checkerspot, *Euphydryas chalcedona* (Nymphalidae) was found in Union City, Alameda Co., CA, on May 25, 2002. The photographs (above right) were taken between 10:55 and 11:05 AM on that warm sunny day. The butterfly was flying in an area about 25 feet in diameter with other, typical Chalcedona Checkerspots, the aberrant interacting with some of them once or twice. The photos of the typical Chalcedona Checkerspot (above left) were taken in Los Altos Hills, CA on May 8, 2002. All photos by Steve Graser. See more of his photos at ***www.beautyofnature.net***.

An Aberrant *Callophrys mossii*



This *Callophrys mossii* (left) was captured at 3500' on Drum Powerhouse Road near Dutch Flat on the west slope of the Sierra Nevada (Placer Co., CA). The unusual markings are not wear and tear, but are unblemished scales. The strange coloration is not restricted to the wings as the right antennal club is also strangely colored. Photos by Matthew L. Forister.

William Derham, Forgotten Early Lepidopterist

Arthur M. Shapiro

Center for Population Biology, University of California, Davis, CA 95616

The publication of **The Aurelian Legacy** (Salmon, 2000) has stimulated interest in the history of Lepidopterology and how it fits into the broader history of science. While Salmon has given very informative treatments of several early figures in the British tradition, he does not mention William Derham, and that is an oversight worth correcting.

William Derham of Stoulton (1657-1735) was a correspondent and friend of the great John Ray (1627-1705) and became his literary/scientific executor and first biographer. Like Ray he was simultaneously interested in science and theology. Derham received his B.A. from Trinity College, Oxford in 1679 and was ordained in the Church of England two years later, becoming Vicar of Upminster, Essex. He began contributing original observations and experiments to the Transactions of the Royal Society in 1697 and was elected a Fellow in 1702. His interests ranged over both the physical and biological sciences. According to the (British) **Dictionary of National Biography** (Stephen and Lee 1922) he is "said to have made large collections of birds and insects." He was clearly very knowledgeable about insects. In 1713 he published a major work, **Physico-Theology**, which followed in the tradition of Ray's classic **Wisdom of God manifested in the Works of the Creation** (1691) by arguing from the complexity and efficacy of Nature to the necessary existence of God as its Designer. **Physico-Theology** includes a lengthy chapter on insects, enriched (like most of the book) with original observations, which are presented as footnotes. A number of those concern Lepidoptera. They demonstrate that Derham was a careful, acute observer.

The quotes that follow are from the Third Edition of the work (1714). It went through 9 more editions by 1750 and had been translated into French, Swedish and German.

On the colors of Lepidoptera:

> It is well know to all Persons any way conversant in Microscopical Observations, that these elegant Colours of Moths, and Butterflies, are owing to neat and well made Feathers, set with great Curiosity and Exactness in Rows, and good Order. (p. 368, note 7; italics here and hereafter in original)

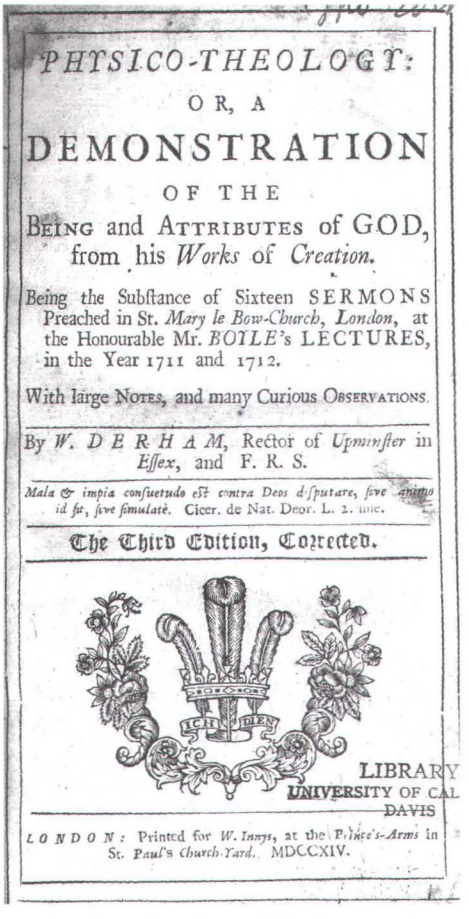
> The Wryneck, at a distance, is a Bird of mean Colour...but in the Hand we see its light and darker Colours so curiously mixed together, as to give the Bird a surprizing Beauty. The same is also observable in many Insects, particularly of the Phalaena-Kind. (p. 226, note 19; Phalaena refers to nocturnal moths.)

> (After quoting a fantastic story about camouflage from Pliny) How true this is there may be some reason to doubt; but if any Truth be in the Story, it may be from the Animal's chusing such Company, or Places, as are agreeable to its Colour: as I have seen in divers Caterpillars, and other Insects, who I believe were not able to change their Colour, from one colour to another, yet I have constantly observed to fix themselves to such things as were of the same Colour; by which means they dodge the Spectator's Eye. Thus the Caterpillar that feeds on Elder, I have more than once seen so cunningly adhering to the small branches of the same Colour, that it might be easily mistaken for a small Stick, even by a careful View. So a large green Caterpillar that feeds on Buckthorn and divers others. (p. 242, note 6.)

On host-plant specialization:

> There are many of the Phalaelae (sic), and Ichneumon-Fly tribe, that have their Generation on the Leaves, or other Parts of Trees and Shrubs, too many to be here reckoned up. The Oak hath many very beautiful Phalaenae, bred in its convoluted Leaves, White, Green, Yellow, Brown-Spotted prettily and neatly dappled, and

continued on pp. 49



PHYSICO-THEOLOGY:

OR, A

DEMONSTRATION

OF THE

BEING and ATTRIBUTES of GOD, from his *Works* of *Creation*.

Being the Subſtance of Sixteen SERMONS Preached in St. *Mary le Bow-Church*, *London*, at the Honourable Mr. *BOYLE*'s LECTURES, in the Year 1711 and 1712.

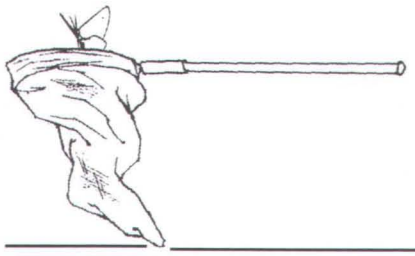
With large NOTES, and many Curious OBSERVATIONS.

By *W. DERHAM*, Rector of *Upminſter* in *Eſſex*, and F. R. S.

Mala & impia conſuetudo eſt contra Deos diſputare, ſive animo id ſit, ſive ſimulatè. Cicer. de Nat. Deor. L. 2. init.

The Third Edition, Corrected.

LONDON: Printed for *W. Innys*, at the Prince's-Arms in St. *Paul*'s Church-Yard. MDCCXIV.



Mailbag...

Wood Chewing, redux...

Dear Editor,

I thank Gary Noel Ross for his comments (News 44(1);15,18) on my report (News 43(4):114-115) about "wood chewing" Juno Silverspot larvae. His explanation of "wood chewing" is very credible; however, controlled experiments are needed. Mr. Ross suggests that Juno Silverspot larvae, away from their host plant, chew on a foreign substrate (such as dead wood) as a result of stimulation by phytochemicals diffusing from a nearby host plant.

Unfortunately Mr. Ross stated that after chewing on the wood the larvae I observed probably "relocated to standard feeding stations". Although two mature larvae were found on the vine after the four larvae left the dead wood, there was no reason to believe that these were larvae that had been "wood chewing".

Since writing the report, I have observed Juno Silverspot "wood chewing" again but on another passion vine on which I placed some dead wood. Mature larvae left the vine and were chewing on it as I describe in my report. Although there were many medium to small sized larvae on the vine, none of them left the vine to chew on wood.

There are still questions that must be answered to fully understand the Juno Silverspot "wood chewing" phenomenon. First: Is the behavior restricted to mature larvae (and why)? Certainly other larval stages are stimulated to feed by diffusing phyochemicals. Second: Why do larvae leave the safety of the host plant, with an abundance of edible plant tissue, to occupy a piece of wood? Not leaving the passion vine, Juno Silverspot larvae usually pupate gregariously on the host plant, although larvae with parasitoids may wander about.

Gerald E. Einem

1424 West Price Road #475, Brownsville, TX 78520.

Name Correction...

Dear Editor,

The last two issues of the **News** (43(4), and 44(1) respectively) carried articles authored by G. E. Einem and G. N. Ross, respectively, on the Juno Silverspot and reputed "wood eating" behavior of its larvae. Both articles give the scientific name of the Juno Silverspot as the trinomen *Dione juno huascama*. This is simply wrong.

The Juno Silverspot was first described and given a scientific name by Tryon Reakirt in 1866 (*Proceedings of the Academy of Natural Sciences of Philadelphia* 18(3): 238-249), who applied the binomen *Agraulis huascuma* to it. W.F. Kirby first transferred this name to Dione in 1871 (*A synonymic catalogue of Diurnal Lepidoptera*. London), who demoted it to infraspecific status, as a variety of *Dione juno* (Cramer, 1779), misspelling it as "*huascama.*" Most subsequent authors blindly followed the erroneous spelling introduced by Kirby, never bothering to check Reakirt's original proposal, up to the most recent "synopsis" of the genus by B. D'Abrera (1984, *Butterflies of the Neotropical Region. Part II.* Victoria), who introduced a new misspelling, "*huascana.*" The correct scientific name of the "Juno Silverspot" is *Dione juno huascuma* (Reakirt, 1866).

Dr Gerardo Lamas
Departamento de Entomologia, Museo de Historia Natural, Universidad Nacional Mayor de San Marcos, Apartado 14-0434, Lima-14, PERU

More Strange Attractors...

Dear Editor,

I thoroughly enjoyed Butterflies and Boots by George O. Krizek (see NEWS 44(1):31,32). I, too, have had numerous experiences with "anthropophilic" or "domesticated" butterflies both in the US and abroad. Although Dr. Krizek mentioned observing butterflies on equipment (for example, net bags and handles, photographic equipment) that has been stained by sweat from hands, his accompanying "photo gallery" did not include an example of a butterfly on photographic equipment. Since I have such a photo, I thought I would share it with readers (see pp. 65).

My photograph was taken on the plateau-like summit of Mt. Magazine, Arkansas (June 20, 1997) while researching the Diana fritillary (*Speyeria diana* (Cramer), Nymphalidae) within a fire-spawned wildflower meadow. (Incidentally, as with Dr. Krizek, I have been "visited" by both female and male Dianas.) Since the morning had been quite warm and dry, I had become uncomfortably heated and had perspired profusely. Therefore, I decided to break about 11:30 AM for my

pack lunch and drink. In order to cool, I decided to take advantage of a nearby oak. Since I was going to return to the same spot, I left my camera tripod and collecting net but disengaged the camera to accompany me into the shade. After the respite, I returned to the sunny meadow. To my amusement, three great spangled fritillaries (*Speyeria cybele* (Fabricius):Nymphalidae) were perched on the tripod, probing with their proboscises—I assume, in search of salts and other chemical compounds that I left behind during my previous hours of tedious work. Since this was one of those "Kodak Moments," I quickly began composing my photo with my hand-held camera. Because I was using a very slow film and I did not have use of the tripod for stability, I deferred to my macro lens instead of my telephoto. This, of course, required me to move in close. This spooked one of the butterflies, which flew away. The other two remained, however, and I secured the photo presented here. After shooting, I continued to observe the butterflies for another 20-30 minutes. But in order to continue my work, I had to disrupt my most welcomed visitors. I wished them well!

Gary Noel Ross

6095 Stratford Ave.,
Baton Rouge, LA 70808

Even Stranger...

Dear Editor,

On 24 May 2002, I had observed a Pale Tiger, *Papilio eurymedon*, feeding on Crimson Columbine, *Aquilegia formosa*, along the Lost Coast Trail some time before reaching Jones Beach at Sinkyone Wilderness State Park in Mendocino Co., CA. After taking in the isolated spot, my friend and I headed back and it was then that I noticed the familiar flier like a miniature vulture riding the thermals of the surf zone. I'd never seen a lep this close to the ocean before. Not really setup for a close up, I crept closer with my camera. "It made sense that it would be checking out a scrap of red plastic," I thought as I slowly inched forward. But it never moved as I took the photo on pp. 69.

Imagine my surprise when I discovered that the object holding her (yes, it was a female) attention turned out to be a mass of scarlet fish eggs! Mineral salts from the eggs or the actual Pacific itself? Just when you think you've seen it all...

Liam O'Brien

1358 West L. St., Benicia, CA 94510

Metamorphosis...

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

Raymond Castilonia,

of Yucaipa, California, a Life Member of the Society who first joined in 1970.

And now...Aberrant Stamps!

Dear Editor,

Here's a report of a mutation in Monarchs. The Mexican Post Office has issued a series of stamps called the "turistico" issue. Twelve of the 31 states participated by providing funds, so they have stamps in the series. Michoacan, where the Monarchs overwinter, is one of the twelve, and look what showed up recently (see pp. 65). Not only has the value of these stamps mutated, actually doubled, but the Monarch on the more expensive one has unusual hindwings. Has anyone from the entomological press noticed this?

Rudy de Mordaigle,

P.O. Box 3030, K76741,
Susanville, CA 96127-3030

"Butterflies of BC" Errata...

Dear Editor,

There are certain errors in the labeling of photographs of the museum specimens for the book "Butterflies of British Columbia" by Crispin S. Guppy and Jon H. Shepard, 2001. They were the result of last minute rushes to meet the publishers' deadlines.

1) Page 254: The captions of the figures of both the upper and under sides of the holotype of *Polygonia oreas threatfuli* wrongly state it is a male. It is a female. The text that describes the new subspecies and the appendix giving the locality where the specimen was collected both correctly say it is a female.

2) Pages 277 & 377: The captions of the figures of both the upper and under sides of the male and the appendix

continued on pp. 51

Bacon, Biscuits, and Butterflies.

Leroy C. Koehn

202 Redding Road, Georgetown, KY 40324-2622, **Leptraps@aol.com**

I grew up on the east side of Cleveland, Ohio. I have no memory of when I began collecting insects, it was just something I always did. By the time I was 12 years old I had amassed a large collection of insects. As a teenager in the early sixties, I had developed a deep passion for Lepidoptera, one that I still have today. But growing up in the city was not easy, especially for a "Butterfly Collector". And, it was even more difficult in the city to find places to collect.

There were four of us in a circle of friends who shared the passion. We journeyed far and wide on our bicycles to collect in parks and along country roads. Collecting in parks was not a problem back then. We collected year round. When snow covered the earth, we went in search of Saturniid cocoons. However, there was a short period of time between when the last of the leaves would fall from the trees and the coming of cold and snow called Indian Summer. It was a special time for the four of us.

As winter approached the four of us believed that the late fall/early winter forms of the species of *Colias philodice* and *Colias eurytheme* were a prize catch. During that time called of Indian Summer, these late flying *Colias* butterflies were on the wing and we went on the hunt.

In the late fall of my sophomore year in High School, the four of us journeyed on our bicycles, about a three hour ride, on a Friday afternoon from our homes on the east side of Cleveland to an area along the Chagrin River in Lake County, Ohio. It was rural farm country and woods back then and we would camp in the woods along the river and collect our fall treasures in the adjacent fields. Pup tents, sleeping bags, food, cooking and collecting gear packed on bicycles would be unloaded, a wood fire would soon heat baked beans in the cans and hot dogs on a stick. Tales and jokes abounded around the fire. The stillness of the night and the murmur of the river sent us to sleep. We were four young men asleep in the woods, unseen and un-noticed, without a worry in the world.

The morning would find us frying a couple pounds of bacon in frying pans, then a dozen eggs into the bacon grease followed by Bisquik biscuits. All consumed in an old army mess kit. Talk about an artery clogger. Coffee cooked with the grounds in the water (We had read about the civil war and learned what the soldiers ate and how they "cooked" coffee.). As the temperature and the sun rose with the bright blue winter sky, we would drink coffee and smoke Camel cigarettes and watch across the old field for the first sign of a butterfly to take flight. And with that first sign of yellow or orange wings, we were up with nets in hand and in hot pursuit. The late form of *Colias eurytheme* and *Colias philodice* were very dark. The undersides of the hindwings were very green and we even thought that they were a separate species. The warm sun of the Indian Summer would set them to flight, most flowers were gone by then, only an occasional dandelion or white aster could be found. Once spotted, it stood little chance to escape. As soon as it found a place to land, we were there with nets ready. An occasional *Polygonia comma* or *Vanessa virginiensis* would take flight and add to the pleasure of the day.

Lunch consisted of fried bologna sandwiches and a couple of bottles of grape juice chilled in the river. Once again a yellow *Colias philodice* would fly and the chase was on. By late afternoon we were on our way home. Each of us had collected a dozen or so of each species and a *Polygonia* or *Vanessa* species or two packed securely away. The journey home along the river road was pleasant. The road would crisscross the river and we would stop in the middle of each bridge to spit in the river. As the last of the leaves would fall from the trees and sail in the wind, the gentle warmth of the winter sun and the company of friends made the journey home one fondly remembered.

Sunday morning before church would find me with spreading boards in hand, admiring the beauty of the butterflies that have left such a deep appreciation of the world nature on a young man then and an older man now.

UCR Fauna...*cont'd from pp. 58*

one record in winter); *Anthocharis sara* (rare, only one record in spring)

Nymphalidae

Agraulis vanillae; Nymphalis antiopa; Nymphalis californica; Polygonia satyrus; Vanessa atalanta rubria; Vanessa cardui; Vanessa virginiensis; Vanessa annabella; Precis coenia; Limenitis lorquini; Phyciodes mylitta

Lycaenidae

Strymon melinus; Satyrium sylvinus; Incisalia augustinus; Brephidium exilis; Leptotes marina; Hemiargus ceraunus; Philotes battoides; Celastrina argiolus

Hesperiidae

Lerodea eufala; Paratrytone melane; Ochlodes agricola; Atalopedes campestris; Polites sabuleti; Hylephila phyleus; Heliopetes ericetorum; Pyrgus albescens; *Erynnis funeralis; Erynnis tristis.*

Derham...*continued from pp. 45*

many more besides; and its buds afford a Place for Cases and Balls of various sorts... and not only the Oak but the Maple also, the White-Thorn, the Briar, Privet, and indeed almost every Tree and Shrub. (p. 379, note 5. "Ichneumon-Fly" as used by Derham refers to gall wasps, not parasitoids, and "Balls" are galls. "Convoluted leaves" appears to refer to rolled or tied foliage, with the moths being primarily Tortricidae.)

And as Trees and Shrubs, so Plants have their peculiar Insects. The White-Butterfly lays its various Offspring on Cabbage-Leaves; a very beautiful ocellated one, its no less voracious black Offspring of an horrid aspect, on the leaves of Nettles...The beautiful Ragwort-Moth, whose upper-wings are brown, elegantly spotted with red, and under-wings are red, edged with brown; these, I say, provide for their beautiful golden-ringed Erucae upon the Ragwort Plant. (p. 379, note 6. As used here, "Plants" means "herbs or forbs." The White referred to is Pieris brassicae; the "ocellated one," Inachis io, and the Ragwort-Moth, Tyria jacobeae.)

On seasonal adaptation:

For a Sample thereof only, I shall take what some may think a mean one, but if considered, deserves our Admiration, and that is the Sagacity of the White-Butterfly Caterpillar, which having fed itself its due time, then retires to Places of Security. I have seen great Trains of them creeping up the Walls or Posts of the next Houses, where, with the help of some Cobweb-like Filaments, they hang themselves to the Ceilings, and other commodious Places, and there become Aureliae; in which State and Places they hang secure from Wet and Cold, till the Spring and warmer Months, when they are transmitted into Butter-flies. (p. 372, note 1. "Erucae" are larvae and "Aureliae" are pupae, despite the subsequent evolution of the word "Aurelian" for Lepidopterist.)

On the motion of larvae:

The Motive, Parts and Motion of Caterpillars are useful, not only to their Progression and Conveyance from Place to Place, but also to their more certain, easy and commodious gatherings of Food. For having Feet before and behind, they are not only enabled to go by a kind of Steps of their fore and hind Parts, but also to climb up Vegetables, and to reach for their Boughs and Stalks for Food at a Distance, for which services, their feet are very nicely made both before and behind. Behind, they have broad Palms for sticking to, and these beset almost round with small sharp Nails, to hold and grasp what they are upon; Before, their Feet are sharp and hooked to draw leaves, & c. to them, and to hold the fore-part of the Body, whilst the hind-parts are brought up thereto. But nothing is more remarkable in these Reptiles, than that these Parts and Motion are only temporary, and incomparably adapted only to their present Nymph-State; whereas in their Aurelia-State they have neither Feet nor Motion, only a little in their hind-parts; and in their Mature-State, they have the Parts and Motion of a flying Insect, made for flight. (p. 398, note 5. This notes gives recognizable descriptions of the prolegs, with their crochets, and of the true legs, as well as the looping motion of Geometrid and similar larvae. "Nymph" used here is another term for larva. "Reptiles" is a functional term, referring to animals that creep on the ground.)

Derham corresponded with various contemporary naturalists and theologians. At least one letter dealing with Lepidoptera is preserved in John Ray's correspondence, which was published by the Ray Society (Lankester, 1848). Apparently Derham must have inquired of Ray regarding moth identification or classification. Ray wrote back on September 6, 1704:

The phalaenae are so numerous, that should I live twenty years longer, and were in condition to search them out, yet I should despair of coming to an end of them, much less of discovering the several changes they go through, from the egg to the Papilio, and describing the erucae and aureliae of each. ("Papilio" here simply means "adult.")

Moth people will, I suspect, agree with Ray on this. Perhaps Ray's comment fueled Derham's remarks on "too many [moths] to be reckoned up."

I would be very interested to hear from anyone who has further information on Derham as Lepidopterist. He published numerous additional works on natural theology and edited or contributed to others in the realm of science. He was appointed Chaplain to the Prince of Wales, (later King George II), and Canon of Windsor, and received a Doctor of Divinity diploma from Oxford in 1730. His works were a major resource for Archdeacon William Paley, whose book "Natural Theology" (1802) formed the centerpiece of a creationist understanding of the biosphere until Charles Darwin and Alfred Russel Wallace offered an alternative view in their joint presentation of 1858.

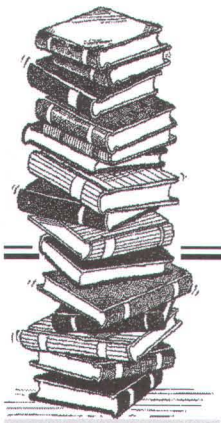
Literature cited

Derham, W. 1714. Physico-Theology; or, a Demonstration of the Being and Attributes of God, from his Works of Creation. Third Edition. London: W. Innys.

Lankester, E. (eds.) 1848. The Correspondence of John Ray. London: The Ray Society.

Salmon, M.A. 2000. The Aurelian Legacy: British Butterflies and their Collectors. Essex, U.K.: Harley Books.

Stephen, Sir L. and Sir S. Lee. 1922. Dictionary of National Biography, v. 5. Oxford: Oxford University Press.



The Lepidopterists' Bookshelf

P. J. DeVries, Editor

Anyone knowing of the publication of new titles of books, video, or audio tapes of interest to lepidopterists, and especially of books published outside the United States, are requested to send full particulars to the Book Review Editor, The Lepidopterists' Society, both for announcement in this column and to allow for timely review in the **Journal** or **News** of The Lepidopterists' Society.

Publishers are invited to send review copies directly to the Book Review Editor for consideration for review in the **News** or **Journal**. Members interested in reviewing books for the **News** or the **Journal** should send their requests or interests to:

Dr. P. J. DeVries, Director, Center for Biodiversity Studies, Milwaukee Public Museum, 800 West Wells St., Milwaukee, WI 53233, U.S.A.
Tel: (414) 278-6939
Fax: (414) 278-6100

E-mail:
pjd@mpm.edu

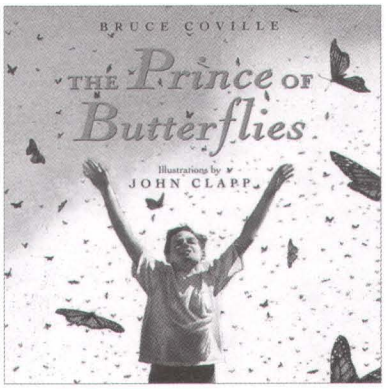
The Prince of Butterflies

by Bruce Coville, illustrated by John Clapp. Harcourt Children's Books, 2002. Ages 6 and up. 40 pages, 10½" x 10½" (27 x 27 cm), color throughout. Hardcover, $16 (US). ISBN 0-15-201454-3.

The Prince of Butterflies is a fictionalized account of an 11-year-old boy who helps a "swarm" of Monarch butterflies to find a new resting place during their migration after their "traditional" resting place is lost to development. It is, according to the publisher's news release, loosely based on an event from the author's own life.

"Coville lived around the corner from his grandparents' dairy farm...in rural New York State...and one day a swarm of monarchs landed on his parents' house." Coville says, "Seeing the side of my childhood home covered by monarch butterflies was one of the most astonishing moments of my life. It stayed with me for decades, and at some point I realized I wanted to write about it, though it took another several years for me to find the right story to wrap around it."

While Coville's heart might be in the right place, I fear that he should have waited for a better story. The author of more than 80 children's books, including the award-winning **Magic Shop** books, Coville's story incorporates the fantastical notion that butterfly "swarms" have some kind of telepathic group mind that have the ability to communicate with a young boy, then transform him into a



butterfly so that he may lead them to a new meadow. This happens a couple more times in subsequent years but then stops. The little boy grows up to study butterflies but gets thrown out of his college program because "he could not bring himself to collect butterflies and pin them." Still, three decades later the former boy/butterfly convinces Congress to pass a "Butterfly Road" bill that saves the monarch from extinction.

Come to think of it, maybe telepathy and transfiguration are not the "real" problem here! As far-fetched or unreal as the premise is, I shudder at the thought that the author's anti-collecting butterfly savior is *not* fictional.

Still, as fantastical and outlandish as the story is, John Clapp's artwork smacks of realism. Joyfully, there are no cartoon butterflies here, but realistic "watercolor" paintings of real Monarchs with a real little boy, who, unfortunately, is doing unreal things. The juxtaposition is startling and somehow disappointing.

Now, don't get me wrong, I've been reading and enjoying fantasy and science fiction since I was younger than Coville's young hero, but even at that age I wouldn't have believed this story for a minute. Maybe I'm missing the point (but my wife, who has been involved in counseling and educating children of various ages for more than two decades, also had problems with it). It's a shame really, because attracting children to lepidopterology is one of our great challenges. This book, unfortunately, presents an unbalanced(!) and unrealistic view of lepidopterists and will not help us in the least.

Phil Schappert

Integrative Biology, University of Texas, Austin, TX 78712-1064

More book reviews on pp. 59...

Mailbag...*continued from pp. 47*

giving locality where the specimen was collected both wrongly state the male is the holotype of *Speyeria callippe chilcotinensis*. On page 277 the text correctly states that the female figured from Riske Creek, BC is the holotype.

3) Page 327: The museum specimen photographs of male "*Cercyonis oetus phocus*" are *Cercyonis stenele*.

4) Page 347: The museum specimen photographs of "*Oeneis jutta ridingiana*" are *Oeneis jutta reducta*.

Crispin S. Guppy
and Jon H. Shepard
6420 Barabanoff Rd., Nelson, BC
V1L 6V1, Canada

The Commonly Rare *lineata*...

Dear Editor,

I wish to report that I saw and photographed a white-lined sphinx moth, *Hyles lineata*, nectaring from my white azalea flowers. According to the map for the species at the Moths of North America (), Okmulgee County, Oklahoma is not included. The photo (see pp. 65) was taken in Okmulgee, Okmulgee Co., Oklahoma. The directions say "*New County records, unless for an immediately recognizable species, are based on museum specimens, authoritative monographs or other publications, or records from recognized experts. The authors will accept new county records as long as they have been confirmed by a recognized expert or are accompanied by a voucher specimen or a recognizable photograph. To have your records confirmed by a local expert, we suggest contacting the nearest university or college's entomology department or a member of The Lepidopterists' Society.*" There are no colleges or universities in the near vicinity to report my findings so I am reporting it to you. At first I thought I saw a hummingbird!

Betty Brown
bjbrow@msn.com

Notice

Will you be up to date in the new Membership Directory?

The deadline for submitting new or revised information for the biennial Membership Directory is Friday, 18 October 2002 (the Directory will be mailed with News #4). If you want fellow members to know your interests and be able to contact you, it's important that your listing be as current and informative as possible.

Your listing is most likely **not** up to date if, within the last two years, you

- ✓ have moved,
- ✓ have a new Area Code or entirely new phone number
- ✓ have a new FAX number
- ✓ have a new e-mail address
- ✓ have a previously unlisted website
- ✓ have changed or refined your lepidopterological interests
- ✓ have joined without completing a membership application

Review the Application for Membership on the inside back cover of the 2000 Membership Directory to see what kind of data we report. Can't find your Directory or a Membership Application? Then tell me your interests:

- ✓ are you interested in butterflies, microleps, macroleps, or all Lepidoptera?
- ✓ do you collect, exchange, buy, or sell Lepidoptera specimens?
- ✓ list specific superfamilies, families, genera, and/or species that are of particular interest to you
- ✓ do you have other, more general, interests in the field, such as butterfly gardening, taxonomy, distribution, conservation, etc.? (State your specific and general interests in narrative form; keywords will be indexed, e.g., "taxonomy, morphology, and distribution of Neotropical Arctiidae"; "butterfly photography in protected areas.") Note that **space is limited** in this part of the database; long entries will be condensed or abbreviated to fit, and some information may have to be omitted.
- ✓ do you want all or part of your membership data omitted from the Directory? You have only three choices here: **do not print** (1) anything; (2) your address and phone (only your name will be printed); **or** (3) your home and work phone numbers (your FAX and e-mail will be printed). These options are mutually exclusive—you may only choose one, if any.

How do you know whether the information already on file is correct? (1) review your listing in the 2000 Membership Directory; if you haven't informed me of any changes, then that is what will be in the 2002 Directory; (2) e-mail me, requesting a "screen shot" of your present data; I will e-mail this to you as an e-mail attachment in Word 98 or RTF format (specify which); (3) mail me a request for a "screen shot" to be sent to you in the *self-addressed, stamped envelope provided by you*; (4) telephone me to discuss your listing (it will take a few minutes to launch the program if I'm not running it at the time).

Please direct all communications concerning membership data to Julian Donahue, 735 Rome Drive, Los Angeles, CA 90065-4040. e-mail: ***Julian@Donahue.net*** or ***Bugbooks@aol.com***; phone (323) 227-1285 (*Pacific Time*: if you call before 11 a.m. Eastern Time I will be *very* grumpy).

Julian Donahue

Membership Update...

Julian Donahue

This update includes all changes received by 24 May 2002.

"Lost" Members

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

Hernandez, Luis Roberto (Mayaguez, Puerto Rico); **Kawahara, Akito** (Ithaca, NY); **Kocman, Stanislav** (Czech Republic); **Leski, Michael** (Somerville, MA); **Longhibler, Nancy** (Missouri); **Thomas R. Taylor** (New Haven, CT); **Williams, Benjamin D., III** (Pomfret Center, CT).

Minor changes/corrections to 2000 Membership Directory:

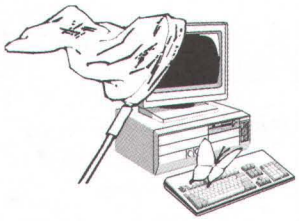
Brown, Keith S., Jr.: new postal code is 13.083-970.
Fernandez, Sharyn is now Sharyn F. Galloway [name change].
Mower, Robert C.: new ZIP+4 code is 84097-4906.

New and Reinstated Members

Members who have joined/renewed/or rescinded their request to be omitted since publication of the 2000 Membership Directory (not included in the 2000 Membership Directory; all in U.S.A. unless noted otherwise)

Adams, Don: 481 East Center Street, West Bridgewater, MA 02379-1815.
Awad, Edward W. (Ph.D.): 516 Hermitage, Point-Claire, Quebec H9R 5A9, **Canada.**
Babcock, Mary: [address omitted on request]
Bailey, Martin: 102 – 1833 Coteau Avenue, Weyburn, Saskatchewan S4H 2X3, **Canada.**
Beck, Barbara Hardin (Ph.D.): 10947 36 Avenue NW, Edmonton, Alberta T6J 0B9, **Canada.**
Bernhardt, Roger K.: P.O. Box 1854, Sebastopol, CA 95473-1854.
Bird, Charles Durham (Ph.D.): Box 22, Erskine, Alberta T0C 1G0, **Canada.**
Campbell, Forrest: 65 Surfsong Road, Johns Island, SC 29455.
Carlson, Brad: 104 Circle Drive, Minden, IA 51553.
Carr, Heather: 1301 McClellan Road, Anderson, SC 29621-2528.
Ciavola-Carboni, Teddie: P.O. Box 2864, Warminster, PA 18974-0087.
Darmstadt, Chip: 502 Elm Street, Montpelier, VT 05602-2009.
Davkov, Slobodan: Tone Tomsic 25/1-16, 1000 Skopje, **Republic of Macedonia.**
DeLisle, Julien: 1072 Blvd. Lesage, Laval, Quebec H7E 2Z2, **Canada.**
Detore, Jon P.: 2400 52nd Street North, Saint Petersburg, FL 33710-3547.
Eisele, George: 2240 South Bull Run Road, Fowlerville, MI 48836-9266.
Heffernan, Emily: 113 SE 10th Street, Gainesville, FL 32601-6904.
Golding, Richard T.: 246 North 300 West, Jerome, ID 83338-5354.
Horn, David J.: Dept. of Entomology, Ohio State University, 1735 Neil Avenue, Columbus, OH 43210-1293.
Iftner, Cameron D.: 401 West Brown Street, Harvard, IL 60033-2338.
Kersten, Sharon: 5576 County Road 250 Loop, Cameron, TX 76520-4943.
King, Maria E.: 5 Newberry Street, Rennselaer, NY 12144-4232.
Kronforst, Marcus R.: Section of Integrative Biology, University of Texas at Austin, Austin, TX 78712-1064.
Kuipers, Scott W.: 29W160 Pomeroy Street, West Chicago, IL 60185-3665.
LaGasa, Eric: Washington State Department of Agriculture, P.O. Box 42560, Olympia, WA 98504-2560.
Layron, Leodegario: Marl Insects and Butterfly Culture, P.O. Box 4, Boac, Marinduque, **Philippines.**
LeBlanc, Thomas P.: P.O. Box 254, Salamanca, NY 14779-0254.
Lee, Sang Mi: Department of Entomology, Mississippi State University, P.O. Box 9775, Mississippi State, MS 39762-9775.
Petit, Jean-Claude: 2 Rue du Maréchal Juin, F-45100 Orléans, **France.**
Pfeiffer, Bryan M.: 113 Bartlett Road, Plainfield, VT 05667-9658.
Roe, Amanda: Dept. of Biological Sciences, University of Alberta, Edmonton, Alberta T6G 2E9, **Canada.**
Rota, Jadranka: 75 North Eagleville Road, #U-43, Storrs, CT 06268-1712.
Rustay, Christopher: 1824 Stanford Drive NE, Albuquerque, NM 87106-2538.
Spitzer, Karel (Ph.D.): Radounka 58, CZ-37701 Jindrichuv Hradec, **Czech Republic.**
Tyson, Norman E.: 239 North Pine Street, Lancaster, PA 17603-3434.
Webb, Bruce: 8204 Cantershire Way, Granite Bay, CA 95746-9476.
Wolfe, Ted: 59 Lemont Street, Bath, ME 04530-1653.
Yack, Jayne E. (Ph.D.): Department of Biology, College of Natural Sciences, Carleton University, 1125 Colonel By Drive, Ottawa, Ontario K1S 5B6, **Canada.**
Zaspel, Jennifer: [address omitted on request]
Zieher, Dan: 2140 Jefferson Street, Stevens Point, WI 54481-3820.

continued on pp. 54



Out of the Net...

by Jim Taylor, ***drivingiron@earthlink.net***

The first matter of business: note the new email address. I won't say I was unhappy (extremely) with my former ISP, but I am paying more money for this connection – and I am glad I am. So there.

An issue or so ago, in response to some negative email, I reiterated my opinion on the dire straits in which some are claiming the Monarch population is finding itself. In response, Editor Phil and I received the following from Dr.

> cols the local Mexican populace BENEFITS from the new plan because their needs are included, both financially and with regard to supplies of wood."

Dr. K, I didn't "buttress" anything; I said I had reviewed what I had written and hadn't changed my view. "Buttressing" is reinforcing, strengthening. I didn't offer any evidence in the prior article. I merely expressed an opinion. Further, I did not write a "summary of

Texas Association of Nurserymen, and the Texas Pest Management Association. Browse if you like, but you might want to select "Chewing insects" under "Profile type." Nine pictures are grouped on the next page. Select the center right picture of the Canna leaf.

The villain responsible for the Canna leaf's condition is a rather large and attractive skipper. Click on the picture of the adult, and you will see a dead creature on its side with its legs curled

Members...*continued from pp. 52*

Address Changes

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

Aiello, Annette (Dra.): Smithsonian Tropical Research Institute, Unit 0948, APO AA 34002-0948.

Albert, Edgar: 13008 East 233rd Street, Peculiar, MO 64078-9391.

Amarillo-Suarez, Angela R.: 659 South Limestone, Apt. 10, Lexington, KY 40508-3265.

Braby, Michael F. (Dr.): School of Botany and Zoology, The Australian National University, ACT 0200, **Australia.**

Cadiou, Jean-Marie (Dr.): Zaragoza 21 B, E-41000 Sevilla, **Spain.**

DeRoller, Charles J.: P.O. Box 374, Victor, NY 14564-0374.

East, Raymond (Randy) James: 25 Coolbrook Court, East Amherst, NY 14051-2459.

Epstein, Marc (Dr.): Department of Entomology, MRC 105, National Museum of Natural History, Smithsonian Institution, P.O. Box 37012, Washington, DC 20013-7012.

Everett, Gail: 19 Old Pulp Mill Lane, Norway, ME 04268-5249.

Gould, Walter P.: 6403 Darwin Road, Laurel, MD 20707-2971.

Hoskin, Michael J.: P.O. Box 233, Sutton West, Ontario L0E 1R0, **Canada.**

Lehman, Curtis A.: P.O. Box 409, North Versailles, PA 15137-0409.

Miller, Scott E. (Dr.): Dept. of Systematic Biology, Smithsonian Institution, National Museum of Natural History W620, MRC 105, P.O. Box 37012, Washington, DC 20013-7012.

Morewood, Wm. Dean: 164 Spring Street, State College, PA 16801-7158.

Mouw, James: 102 South Pinecrest Road, Payson, AZ 85541-4217.

Murray, Debra: Department of Entomology, 2046 Cordley Hall, Oregon State University, Corvallis, OR 97331-2907.

Pellmyr, Olle (Prof.): Department of Biological Sciences, University of Idaho, Moscow, ID 83844-3051.

Pogue, Michael G. (Ph.D.): 9313 Furrow Avenue, Ellicott City, MD 21042-1849.

Purdum, David A.: 11463 Mandarin Glen Circle W, Jacksonville, FL 32223-7840.

Raguso, Robert A.: University of South Carolina, Wiler Life Sciences Bldg., 701 Sumter Street, Columbia, SC 29201-ND.

Robbins, Robert K. (Dr.): Smithsonian Institution, P.O. Box 37012, NHB Stop 127 (E-514), Washington, DC 20013-7012.

Tokunaga, Takehisa (Ph.D.): 2-16-40 Shinishikawa, Aoba-ku, Yokohama, Kanagawa 225-0003, **Japan.**

Torres, Phillip: [address omitted on request]

Voss, Edward G. (Dr.): University of Michigan Herbarium, 3600 Varsity Drive, Suite 112, Ann Arbor, MI 48108-2228.

Watanabe, Mamoru (Prof., Dr.): Laboratory of Conservation Ecology, Institute of Biological Sciences, University of Tsukuba, Tsukuba, Ibaraki 305-8572, **Japan.**

Zakharov, Evgueni V.: Lab of Entomology, Institute of Biology & Soil Sciences, Vladivostok 690022, **Russia.**

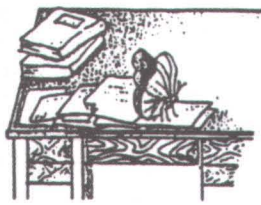
Net...*continued from pp. 53*

Hard to believe, but I began this column almost six years ago at the request of the Minnos, Editors of the News at that time. The first several columns didn't make it into the News under their aegis; problems with their computer bumped the first one to Editor Phil's tenure.

The original idea was to seek out web sites dealing with Lepidoptera—something which might be difficult for the average Lep-per to find. Well, progress in search engines has been astonishing in the intervening years, and a few seconds with most of them will offer up a gold mine. Further, sites such as the Ohio Leps and others are offering monster lists of resources. For example, look at our own organization's site at ***www.lepsoc.org*** (or at its current redirect site ***www.furman.edu/~snyder/snyder/lep/***). Click "Internet Resources," and you will have access to more sites than you can comfortably visit.

The point is that the original purpose of this column is gone. If you'll read the columns in sequence (as I just did), you'll see they have morphed from finding interesting sites into an editorial of my opinions. And these latter more properly belong on LEPS-L or clutched tightly to my breast ('scuse me, Mr. Nietzsche), depending on how bizarre they might be.

So, while I appreciate your attention over the last several years, I'm outta here.



From the Editor's Desk

Phil Schappert

While your erstwhile editor has lots to say (those who know me know that I *always* have lots to say), I—joyfully—have no space in which to say it. Another 36 page issue! Thanks once again to all of you for your submissions—you make the News what it is. The next submission deadline is just *before* you receive this! Get cracking...

The Lives of Butterflies: Tails & Tales

Gary Noel Ross

Social Butterflies

Although most butterflies live non-social lives, some individuals of some species do at times respond collectively to each other. Common examples of social interactions include habitual night roosts by hundreds of mixed species of longwing butterflies (Nymphalidae: Heliconiinae), communal roosts by migrating and hibernating monarch butterflies (*Danaus plexippus* (Linnaeus), Nymphalidae: Danainae), and mud puddling by males of assorted species.

However, hundreds of hours of field work investigating the feeding behavior of a large number of butterfly species, representing most major taxonomic groups, has led me to conclude that many individual butterflies often "tail" each other to feed in what I call group nectaring, social feeding, or social dining (see the author's color photos on pp. 68). For example, within a wildflower meadow or butterfly garden containing one or more species of flowering plants known to be butterfly favorites, feeding butterflies are not usually distributed randomly throughout the area. On the contrary, at any given time, butterflies usually congregate on individual flowers of but a few particular plants.

At first, this could be interpreted as a result of flower maturity or state of nectar production. In other words, all flowers are not created equal—even if they are on the same plant. To explain, nectar production in any given flower depends upon many factors including flower age. Often, flowers provide specific visual cues to alert potential pollinators that they are "primed" for visitation. If pollinators do not receive these signals they bypass what appears to be a tempting dining plate. However, by contriving simple experiments using butterfly decoys (both real and fake) I have been able to demonstrate that although many flowers in a given area or even on a given plant may be synchronous regarding nectar production, a wandering butterfly is most attracted to a flower that is already occupied with another butterfly.

The hungry visitor will then attempt to take up a position on that same flower head. If the flower head is large enough (for example, a composite) to accommodate more than one butterfly, the original occupant usually exhibits no objection and the "new kid on the block" usually settles in unopposed. On the other hand, if space is indeed a limiting factor, some jousting may ensue. Usually, the more aggressive or more persistent individual wins, while the "banished" simply moves to an adjacent flower—where it may remain or retry to interlope at a later time.

On an active day, a single large flower head can become congested with multiple butterflies. In time, if one butterfly relocates to another flower, all others, as if on cue, will follow in a type of insect "follow the leader" or "musical chairs." This "game" can continue throughout the day and can be quite entertaining for the astute "butterfly voyeur." (Of course, the first butterfly to approach a patch of flowers early in the day would have to take advantage of flower cues to decide on its initial perch.)

Social feeding makes good economic sense, of course. After all, a butterfly perched atop a flower signifies a rich source of nectar. Why spend time and energy searching elsewhere? (Don't we exhibit this same type of behavior when searching out a new restaurant?). Furthermore, research indicates that butterflies have evolved strategies that allow them to take advantage of each other. Consider butterfly vision.

We now understand that many species of butterflies have the widest range of color vision known within the animal kingdom. Butterflies see not only every color that you and I see, but ultraviolet wavelengths as well. And since many butterflies are endowed with wing scales that reflect in the ultraviolet range, I think it safe to theorize that butterflies are very much aware of each other. However, heretofore most researchers have assumed that this unique color recognition functions primarily with mate selection.

My fieldwork indicates that there may be at least one other function: the ability to recognize one another during feeding forays. This is even more plausible when one considers another aspect of butterfly vision: motion detection. Like all adult insects, butterflies possess a pair of compound eyes—structures composed of many individual units, each specialized for detecting and pin-pointing the slightest change in position of elements within the environment.

Considering these two visual acuities, I suppose that any butterfly perched

continued on pp. 63

This article continues a series of light-hearted columns about the lives of butterflies (and butterfliers). Contact the author of this installment, Gary Noel Ross, at 6095 Stratford Ave., Baton Rouge, LA 70808. Contact series editor, Bob Robbins, at the Department of Entomology, NHB 127, NMNH, Smithsonian Institution, Washington, DC 20560-0127, (202) 357-2353, **robbins.robert@nmnh.si.edu**

The Marketplace

***IMPORTANT NOTICE TO ADVERTISERS:* If the number following your advertisement is "434" then *you must renew your advertisement* before the next issue! Remember that all revisions are required in writing.**

Books/Videos

Butterflies of the Australian Region (Vol. 1) by B. D'Abrera. 1971. This edition is out of print. Excellent condition, with marginal discoloration only. $180 postpaid. Glenn A. Gorelick, Dept. of Biological Sciences, Citrus College, 1000 W. Foothill Blvd., Glendora, CA 91741, e-mail: ***ggorelick@citrus.cc.ca.us*** 442

For sale: Journal of the Lepidopterists' Society, vols. 24 (1970) through 55 (2001), all in excellent condition. Also available: News from 1970 through 2001 complete except #2, 3 of 1996, #5 of 1980 and #3 of 1971. Best offer for all. Baldhard Falk, P.O Box 315, Belvedere, CA 94920-0315, ***falktibrn@aol.com*** 442

Books for sale. The first 3 color-illustrated volumes of "Mariposas del Ecuador," edited by Dr. Giovanni Onore, (1) Generos; (2) Arctiidae (part); and (3) Papilionidae are available at $27 per volume, postpaid in the U.S. (outside will be at rate of postage). Checks should be made out to Charlie Covell, Dept. of Biology, Univ. of Louisville, Louisville, KY 40292-0001. Funds all go directly to Dr. Onore to enable future publication, of which a Sphingidae fascicle is expected soon. 434

Livestock

Coccoons of *C. angulifera*, $5.00, and *Samia cynthia*, $3.00 each, + $7.50 S & H. Thomas Frey, 364 Oaklyn Rd., Lebanon, PA 17042-5858, ***snakes364@lmf.net*** 442

Eggs and cocoons of many northeastern North American Saturniidae available for sale fall 2002: *Actias luna*, *Antheraea polyphemus*, *Automeris io*, *Callosamia promethea*, *Hyalophora cecropia*, *Hyalophora columbia*, *Samia cynthia*. Bill Oehlke, Box 476, Peardon Road, Montague, Prince Edward Island, Canada C0A 1R0, 902-838-3455, ***www3.islandtelecom.com/~oehlkew***, ***oehlkew@islandtelecom .com*** 442

For sale or trade: Diapause cocoons of *Callosamia angulifera*, *Callosamia promethea* and *Samia cynthia*. Please call before 10 pm EST. Thomas Frey, 364 Oaklyn Rd., Lebanon, PA 17042, (717) 272-6597. 441

For Sale: Live pupae of Nymphalidae, Pieridae, Papilionida, *T. maggelanus*, *T. rhadamantus* and other species of Philippine butterflies. Send order to: Leodegario Layron, P.O. Box 4, Boac, Marinduque, Philippines. Tel. 042-332-1558; Fax 0063-423-321-558. 441

Wanted to Buy: Eggs or pupae of *Rothschildia forbesi*, *Eacles imperialis* and *Citheronia regalis*. Page Don Olhausen at (713) 501-6353 or call (281) 446-8588. 19415 Haude Rd. Spring, TX 77388. 441

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.** Advertisements for credit, debit, charge cards or similar financial instruments or accounts, insurance policies and those for travel or travel arrangements cannot be accepted because they jeopardize our nonprofit status.

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 and must be renewed before the deadline of the following issue to remain in place. All ads contain a code in the lower right corner (eg. 386, 391) which denote the volume and number of the **News** in which the ad. first appeared.

Advertisements must 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. 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 Lepidopterists' 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.

Help wanted: Livestock and advice for rearing + breeding Saturniidae, Papilionidae, *D. plexippus*. Just a beginner but lots of interest. Chris Davis, 267 N. Lakes Dr., Eastman, GA 31023, 478-374-6264 evenings. 434

For sale: Cocoons for spring 2002: *Actias luna*, *Hyalophora cecropia* & *Antherea polyphemus*. Framed set specimens also available. Send SASE to Alan Vosefski, 3320 Old Kirkwood Dr., Virginia Beach, VA 23452, 757-498-3168, ***alanv@peoplepc.com*** 434

Livestock wanted: Wanted to buy, ova and/or pupa of *Citheronia regalis* and *C. sepulcralis* for Spring/Summer 2002. Ron Roscioli, 101 Rose Ct., Easton, PA 18042-9546, 610-253-8458. 434

Specimens

Butterflies,Saturniides and Sphingiides from Latin and South America and the Caribbean Islands, as well as from the palearctic region. Very large selection of rare, hard to obtain species and common butterflies. We also always have a small list of interesting undetermined Beetles from these areas. Please contact us for our list. Robert Westphal, Calle Llimoner 6 (Urb. Pino Alto), E-43892 Miami Playa(Tarragona), SPAIN, Tel/Fax:++34+977+810787, ***Westphal.Ramos@terra.es*** 442

Rich variety of *Charaxes* and Papilionidae from Africa available. List available on request. Wanted: *Charaxes* and Papilionidae from Eastern/Southern Africa. Giancaarl Veronese, Viale Venezia 138-33100 Udine (Italia), Fax: 0432/232654, ***gc.veronese@ iol.it*** 442

For sale or exchange: Iranian butterflies. Ahmad Karbalaye, P.O. Box 11495-175, Tehran, Iran, Tel/Fax: 0098.21.7531604, ***karbalaye@yahoo.com*** 442

For exchange: Eastern North American *Catocala* in exchange for other *Catocala* species worldwide, in particular, those from the Central and Western United States. All inquiries will be answered. Dr. Ken Neil, P. O. Box 410, Canning, Nova Scotia, Canada. B0P 1H0, ***irene.neil@ns.sympatico.ca*** 441

For Exchange: Many species of A1 mounted Noctuidae (Cuculliinae, Hadeninae, Amphipyrinae, Plusiinae, *Catocala*, etc) and Arctiidae of Japan. Also, large numbers of A1 papered butterflies (Papilionidae, Pieridae, Nymphalidae, Satyridae and Lycaenidae) of Japan. I am interested in A1 mounted Noctuidae (as above with *Perigrapha*) and Arctiidae (*Pararctica*, *Arctia* and various *Grammia*) of North America. Shin-ichi Ohshima, Shimohideya 707-99, Okegawa, Saitama (363-0025) Japan. Fax (81) 48-787-0290, ***o_shima@nifty.com*** 441

For sale or exchange: Space constraints force me to thin my collection of duplicate African, N. & S. American Papilionidae acquired over 27 yrs. Many are rare and difficult to obtain. Send SASE for list or send your want list and I will advise on availability. Rick Rozycki, 5830 S. McVicker Ave., Chicago, IL 60638. 434

Wanted to exchange/purchase: bright, colorful small/medium, night/day flying moths from all exotic places. Have collected in small #s because they are of little commercial value and dealers do not bother with them. Have many beautiful individual photos to share from 40 yrs of collecting. Robert Aronheim, ***agriasman@aol.com*** 434

Equipment

For Sale: Traps for Collecting Lepidoptera. **Light traps:** 12 Volt DC or 110 Volt AC with 15 watt or 20 watt black lights. These traps are portable and easy to use. Rain drains and sorting screens protect specimens from damage. Straight tube design provides 360 degree light visibility. Stainless steel or plexiglass vanes. **Bait Traps:** Three types available, Tropical, Inverted Funnel and Flat Bottom. 25" W x 36" height, nylon coated fiberglass screen with a heavy cloth top, plastic zipper in the side for access, and a plywood platform. Optional shroud/hood provides a dark area for moths to hide. For a free color brochure and price list, contact: Leroy C. Koehn, 202 Redding Road,

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Georgetown, KY 40324-2622, Tele. 502-570-9123; ***Leptraps@aol.com*** 441

Miscellaneous

The "Sphingidae of the Americas" site is an online membership club featuring over one thousand images of Sphingidae from North, South and Central America. Images (adults, larvae, pupae, eggs) are attractively displayed with text giving taxonomies, range, flight times, larval hosts, etc. Visit ***www.silkmoths.bizland.com/samplessphinx.htm*** to see sample files and access registration information and members' comments. Contact Bill Oehlke, Box 476, Peardon Road, Montague, Prince Edward Island, Canada C0A 1R0, 902-838-3455, ***www3.islandtelecom.com/~oehlkew***, ***oehlkew@islandtelecom.com***, for more information. 442

Announcement and Call for Papers: The Southern Lepidopterists' Society Annual Meeting will be held the weekend of September 20-22 in Gainesville, Florida. The meetings will be on Saturday, September 21 at the Florida State Collection of Arthropods, Division of Plant Industries, with viewing of the collection and business meetings in the morning, and presented papers in the afternoon. Friday night and Sunday day collecting may be available but has not been firmly scheduled yet. Anyone interested in presenting a paper is strongly encouraged to do so. Please contact James Adams at ***jadams@em.daltonstate.edu*** 442

For Sale: 1987 Monarch medal, 5 ounces of pure silver, proof quality, serially numbered, with one-ounce ANA medal and certificate of authenticity in leatherette case. Only 2000 minted for Atlanta convention of American Numismatic Association. $750. Info and image by e-mail to ***Julian@Donahue.net***. Julian Donahue, 735 Rome Dr., Los Angeles, CA 90065-4040. 434

Research Requests

Cyclargus thomasi bethunebakeri was once an abundant species in south Florida and the Florida Keys. Since 1992, it has all but disappeared. The only know remaining population is at Bahia Honda State Park on Bahia Honda Key. There is currently a recovery effort consisting of Lepidopterists, Watchers, Breeders and Naturalists, to recover *C. t. bethunebakeri*. However, before any females are removed from the Bahia Honda Key population, a thorough search is underway to look in every corner of south Florida and the Florida Keys. To assist this search, we need locations where *C. t. bethunebakeri* has been collected. We just need the location and dates. We need your help. *Cyclargus t. bethunebakeri* needs your help. Send records to: Leroy C. Koehn, 202 Redding Road, Georgetown, Kentucky, 40324-2622, ***Leptraps@aol.com*** or David Fine, 2924 Dunlin Rd., Delray Beach, FL 33444, ***vladnuts@aol.com*** 442

I am writing a field guide to the butterflies of Nova Scotia. I require any relevant data regarding dates, location, collector, sexes, and numbers of any butterflies collected in this province. Full acknowledgements given to all contributors. All responses would be greatly appreciated. Submit data to Dr. Ken Neil, P.O. Box 410, Canning, Nova Scotia, Canada B0P 1H0. ***irene.neil@ns.sympatico.ca*** 441

I am conducting a phylogenetic analysis of the Snout Butterflies (Nymphalidae: Libytheinae), using both morphological and molecular characters for my undergraduate honors thesis at Cornell University (under the supervision of Dr. John Franclemont and Dr. Quentin Wheeler). To successfully resolve the relationships, I need collaborators to send me specimens of any of the 12 species, dried (in envelope), spread, in alcohol, in Kahle's solution, larvae, etc. It would be best if the alcohol samples are preserved in 95-100% ethanol, and that specimens are placed in Kahle's solution immediately after collected. I will send vials containing alcohol or Kahle's solution to those who are willing to help. In return for your generous help in providing specimens, I can offer an exchange for butterfly or moth specimens from Japan. Akito Kawahara, Department of Entomology, Cornell University, 3131 Comstock Hall, Ithaca, NY 14853 USA, (607) 255-8050, ***ayk6@cornell.edu*** 431

Past Fauna of UC, Riverside

Takao Itoh

Miyazaki Medical College, Kiyotake-cho, Miyazaki 889-1692, JAPAN, titoh@fc.miyazaki-med.ac.jp

Descriptions of the past fauna of a fixed area are necessary to be able to compare it with the present. Eighteen years ago, during 1985-1986, I spent approx. 1½ years in southern California as a Research Associate at the University of California, Riverside (UCR), located at the foot of Box Spring, about 100 miles east of downtown Los Angeles. The partially annotated list below is based upon surveys carried out from Sept. 1985 to Nov. 1986 on the UCR campus. Forty-one species of Papilionoidea and Hesperioidea were recorded.

Papilionidae

Papilio rutulus (relatively common); *Papilio eurymedon* (rare, seen only in the botanical garden); 3) *Papilio zelicaon* (rare, seen only near the entomology department)

Danaidae

Danaus plexippus (relatively common); *Danaus gilippus strigosus* (seen only in the botanical garden)

Riodinidae

Apodemia mormo; Calephelis wrighti

Pieridae

Pieris rapae (seen almost all year round); *Pontia protodice* (relatively common); *Colias eurytheme* (relatively common); *Zerene eurydice* (rare, only

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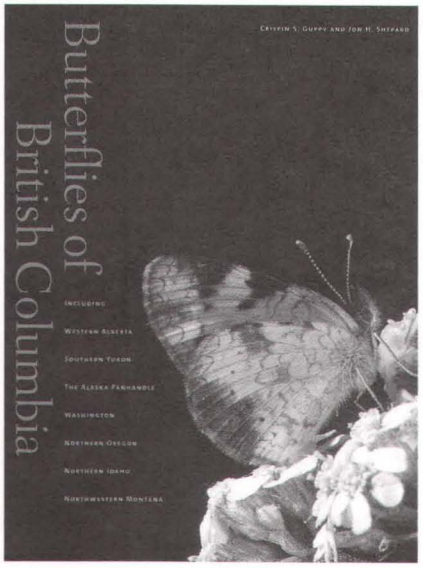
The Lepidopterists' Bookshelf...

Butterflies of British Columbia

including Western Alberta, Southern Yukon, the Alaska Panhandle, Washington, Northern Oregon, Northern Idaho and Northwestern Montana

by Crispin S. Guppy and Jon H. Sheppard. University of British Columbia Press, 2001. 414 pages, 9" x 11" (22 x 28 cm), extensive color photos and maps with "black and white" drawings, charts and details. Hardcover, $95 (Canadian). ISBN 0-7748-0809-8. Available from UBC Press, 2029 West Mall, Vancouver, BC, V6T 1Z2, Canada. Info: (604) 822-4546, Fax: (604) 822-6083, Email: **info@ubcpress.ca**, *Book website:* **www.ubcpress.ubc.ca/butterfliesbc.html**



Cris Guppy and Jon Sheppard's **Butterflies of British Columbia** is *everything* that a regional butterfly book should be (except pocketable). It is the book that all future guides will be measured against and the authors should be justifiably proud of their accomplishment. Everyone—and I do mean everyone—should get a copy of this book, regardless of geographic location. It is just that good...

As befits a regional butterfly guide, almost exactly $^2/_3$ of the book, some 274 pp., are given over to the individual species accounts. Coverage, as the long subtitle suggests, is extensive and there are 187 sp. (264 ssp.) covered, including 178 sp. that are breeding residents in BC (70% of the Canadian fauna) and 9 migrants. It is in the species treatments that this book sets precedents including the use of computer generated locality maps showing exact locations of individual records (rather than a "range" with extralimital dots) for each subspecies adjacent to a phenogram providing the monthly distribution of those records.

Every account also includes color photos of specimens that show both dorsal and ventral views of all subspecies and seasonal or color variants, and there are diagrams of genitalia or wing detail drawings when they are needed for positive identification. Many species also include complete photographic life histories showing egg, mature larva and pupa as well as *in natura* photos of adults. There are more caterpillar photos in this book than I have seen in any other regional guide, and that is always a plus.

The first 80 pages of the book are devoted to the usual preamble, albeit—in this particular case—a worthwhile and enjoyable preamble. The short introduction discusses the overall fauna in context of the regional and national diversity, providing also a large map showing the coverage of the book and names of places/ecoprovinces that are very useful once one gets into the individual species accounts. The introduction is followed by histories of the study of butterflies in BC and the origins of the fauna, subsequent human impact on the fauna and conservation concerns including a particularly well-written treatise on pesticide impacts.

Intriguingly, the section on conservation also includes such far-reaching subjects as impacts of both collecting *and* photography, use of butterfly counts, a lament on the inadequate knowledge of larval food plants in BC (true everywhere), and the use of butterflies in classrooms.

The section on butterfly gardening, which differentiates between gardening for species with open *vs.* those with closed populations and also includes a section on rearing, that is followed by a discussion of salient features of the morphology of immatures and adults. The largest section of the preamble is devoted, justifiably, to the biology of butterflies. Here, once again, the authors have done a wonderful job. This section, while succinct, is an enjoyable, informed, and complete "mini-ecology" of butterflies including discussions of reproductive biology (mate-location, courtship, copulation and oviposition), population biology (structure, migration, a very well done section on mortality sources, and life span), behavior (thermoregulation, over-wintering and feeding behavior of both adults and immatures), ending with a discussion of the introduction of cabbage whites. The final section before the species accounts dis-

continued on pp. 64

Assessing Ultraviolet Reflections of Lepidopterans with Video and Digital Cameras

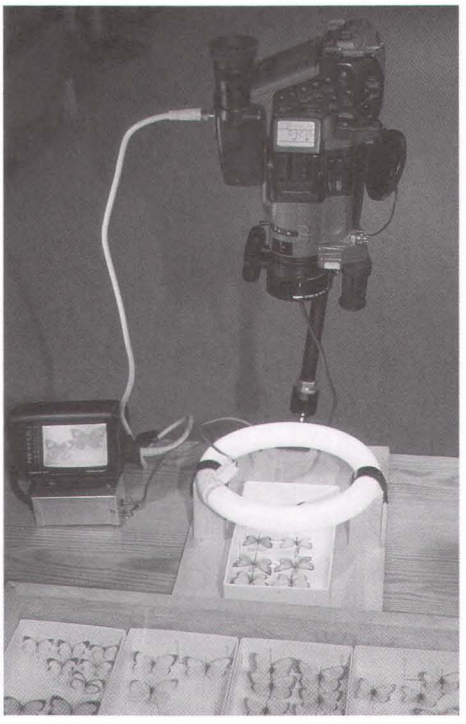
John Acorn

E. H. Strickland Entomological Museum, Department of Biological Sciences, University of Alberta, Edmonton, Alberta, Canada, T6G 2E9

The use of ultraviolet reflectance patterns in butterfly systematics and behavioral ecology is familiar to most lepidopterists. Most books on butterflies show at least one or two ultraviolet photographs of butterfly wing patterns, and the subject of ultraviolet reflectance has recently been reviewed in our society's journal (Knüttel and Fiedler, 2000, J. Lepid. Soc. 54(4): 137-144). It is odd, then, that so few people are familiar with the simple techniques that are available to make this area of lepidopterology instantly accessible to all.

The traditional method of visualizing ultraviolet reflections is that used by Ferris in his classic work on *Colias* sulphurs (e.g. Ferris, 1993, Bull. Allyn Mus. 138: 1-91). Here, one uses a single lens reflex camera loaded with black and white film (some types are more sensitive to UV than others), and places a Tiffen 18A filter (formerly the Wratten 18A) in front of the lens before taking the photograph. This filter allows UV light to pass, but blocks all visible light. Thus, the photographer is unable to focus the camera after the filter has been attached (and UV light focuses at a different plane than visible light as well), and exposure is a matter of guesswork, trial, and error. The results are not visible until the film has been processed, and thus this technique is not one that lends itself to widespread use by everyday lepidopterists.

A "circline" blacklight bulb, mounted about 5 inches above the specimen, is the preferred source of ultraviolet illumination in the Ferris system, since UV reflectance may only be visible from certain angles, and a circular bulb ensures that most possible angles are covered. I use such a bulb myself (the spare bulb for a Bio Quip blacklight trap, #2807C in their catalog), but instead of an SLR and black and white film, I use a video camera. Much to the surprise of most videographers, almost all consumer level video cameras are sensitive to wavelengths of light in the long wave portion of the UV spectrum. Thus, a Tiffen 18A filter placed on even the least expensive of cameras will produce an image of the UV reflectance patterns of just about anything you choose to look at. One of the cameras I use is a partially broken General Electric CG814 that is so junky I can think of no other use for it—such cameras are available cheaply second-hand. To monitor the image as I work, I connect the camera to an inexpensive Realistic Portavision television; a black-and-white model, since color is redundant for these purposes.



Digital still cameras, at least those I have experimented with, also possess sensitivity to the near UV, and can be used to generate quick, informative UV images of lepidopteran specimens. Since the viewfinder of a digital camera or video camera is CCD-based, and not optical, you can see the UV patterns as you work, in real time, and adjust your illumination and exposure accordingly. This also opens up the possibility of using these techniques in the field, with hand-held or free-flying butterflies and moths illuminated by natural sunlight.

One last warning, however—if you choose to try these techniques, don't bother asking camera sales people about which models are most sensitive to ultraviolet light. My experience is that they will tell you that all cameras are carefully designed to avoid the haze that ultraviolet light can produce on landscape photos, and are therefore not sensitive at all. This is simply not true (although some recent video and digital cameras possess built-in infrared cutoff filters, for the other end of the visible light spectrum). You may also be familiar with the "UV filters" that some photographers place on the front of their lens to avoid hazy photos. These filters are nothing more than optical glass plates, which absorb short wave, high-energy UV (UVB and UVC, with wavelengths less than 320 nm) but allow longer wavelength UV (UVA) to pass. Any glass lens will do the same thing, but they all allow enough ultraviolet light to pass for our specialized purposes. It is this long wave UVA that generates reflectance patterns on lepidopteran wings, and that lepidopterans themselves are capable of seeing.

Photo by John Acorn.

Introducing The Alberta Lepidopterists' Guild

Gary Anweiler

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On October 16, 1999 the Alberta Lepidopterists' Guild (ALG) was formally inaugurated at Olds College, Alberta. The founding group of 16 people comprised a mixture of amateur and professional entomologists with a particular interest in Lepidoptera, or at least with a willingness to encourage and support those of us who do. The stated objectives of the new society are to support and encourage the study and appreciation of Alberta Lepidoptera. We also thought that belonging to an official organization would facilitate obtaining collecting permits for provincial parks and other protected areas, and wider access to funding for group projects.

Since that time the group has almost tripled in size. Most active members of ALG are interested mainly in particular groups of the Alberta moth fauna, which have received less attention than the butterflies since Ken Bowman stopped collecting some 50 years ago. New technology, such as mini-generators, low-cost UV and MV bulbs, flatbed scanners and the Internet, has contributed to the resurgence of interest in the moth fauna by making it much easier to obtain and identify specimens. It should be noted, however, that the author of "Butterflies of Alberta" and the five co-authors of "Alberta Butterflies" are all members of ALG as well.

Another event that contributed to our growth was the return of Felix Sperling to the University of Alberta, where among other duties he took on the position of Curator of the Strickland Museum of Entomology. The historical Bowman Lepidoptera collection was soon re-energized into a growing, working collection once again. In conjunction with the museum, a Virtual Museum Project was initiated. Funding was obtained to have the macro-lepidoptera in the collection databased and posted, and to help produce species pages with color images, information on range, host plant and other data, as well as dot-maps that are generated and updated from the database. This is an ongoing project, but already pages for some 200 species of Alberta macro-moths have been completed (***www.biology.ualberta.ca/uasm/uasm.html***). The Strickland Museum has also provided us with space for an ALG Web page on the Museum's Website (***www.biology.ualberta.ca/uasm/alb.lep.guild.htm***). Although rudimentary at this time, we have plans to make it a more useful place to visit in the near future. Two other significant and active collections of Alberta Lepidoptera are housed at the Canadian Forest Service's Northern Forestry Center in Edmonton, and at Old's College in Olds; ALG members curate both. Many members also maintain significant private collections.

Since our establishment group members have been involved in a number of Lepidoptera-related projects. Alberta provincial government personnel (several of whom are members of the group) have been very co-operative in providing permission to collect in provincial parks and other protected areas in return for information on the Lepidoptera fauna found there. This co-operation has culminated in members of ALG being invited to join in faunal surveys of a number of newly established Wilderness Parks in extreme northern Alberta in both 2000 and 2001 (and planned for 2002-2004). All costs are covered, and funding is provided to ALG to prepare reports of the Lepidoptera taken during these surveys. Members of the group have also been invited to give talks or put on Moth Nights," complete with sheets and lights, for a number of Natural History and Conservation groups. ALG Members have also been active in participating in or organizing many of the record number of butterfly counts that are done in Alberta each season. But perhaps most importantly we have done a lot of collecting in the hitherto largely ignored areas of the province, including the Grasslands and Boreal Forest regions.

The most ambitious project in our short history is planned for the summer of 2003, when we will be hosting the Annual Meeting of the Lepidopterists' Society at Olds College. This location is close to both the mountains and the arid grasslands, and is an ideal location for a wide variety of Lepidoptera. On behalf of the Alberta Lepidopterists' Guild I would like to invite you all to join us in Olds, Alberta in July of 2003.

If you would like more information about the group, or are interested in joining (a bargain at $10.00 Canadian for an annual membership), contact the Treasurer, Greg Pohl, at ***gpohl@nrcan.gc.ca***.

SS Reorganization...

cont'd from pp. 62

As a courtesy, I would ask that you contact a Zone Coordinator prior to sending records so that the most efficient and effective means of transmitting data can be achieved. I thank you all for your interest and input.

Effect Data Sharing Can Happen

Ranger Steve Mueller, Director,

Howard Christensen Nature Center/Kent ISD,
16160 Red Pine Dr., Kent City, MI 49330

Lepidopterists can have positive impacts on future generations of people and butterflies by sharing data and specimens. Personally, I feel a permit system would be questionably effective for public lands. Instead, I encourage members in every state to adapt the effective models demonstrated by activities of the Ohio Lepidopterists' Society. Such kinds of data sharing and research partnerships established with government land managers would exceed anything a permit system could hope to achieve.

I conduct scientific inquiry based on professional and avocational interests. The discovery of the unknown is what appeals to me. I often receive rare butterfly and bird reports, but only rarely do I go to see the species. The fun and excitement for me is the discovery of the unknown or unexpected. Rare bird and butterfly alert phone trees get many out to see new or expected occurrences but the thrill for me is the discovery.

I have documented two state records for butterflies and hundreds of county records in various states. Not only were the experiences fulfilling to me, but they have changed the world. Ray Standford and Paul Opler first published the records in county atlas reports for the western and eastern United States. Later the data were included in **Butterflies of the Rocky Mountain Region** or **Butterflies of the Eastern United States**.

I have received grants for specific studies related to management of species based on results of inquiry discovery. Sometimes inquires have had a target species but usually initial inquiry was based on unanticipated discoveries. If I did not share my data, further research and discovery by others would not have followed.

Sharing data is an essential and often ignored component of lepidopterists' avocations. The Lepidopterists' Society encourages members to share their findings via the newsletter or Journal as well as by donating specimens to research or educational institutions, however, I suspect many members collect a lot of data and—perhaps—specimens during a lifetime, that never gets shared. The personal joy of discovery adds to the individual's life but often dies with them.

The data we collect and share can change the world in unknown ways. Specimens I collected are distributed to museums across the US or data shared through popular and scientific articles has affected the world in ways unknown to me.

Avocational birders and butterfliers come to the public site I manage and leave without sharing discoveries. Employees make casual observations and do not record the data in our log. When public education efforts are created, we lack data that was discovered and never shared in a retrievable manner.

The Michigan Butterfly Atlas Project I have coordinated in Michigan since 1995 has provided data on the current distribution of butterflies in the state for comparison with historically records from prior to 1995. Share! Most those sharing data are not from the Lepidopterists' Society even though requests for data have been published in the News.

This article was stimulated by the paper, "Lepidopterists' Perceptions of a Proposed Permitting System for Butterfly Collecting On Public Lands" by Mazzei and Shapiro in J. Lepid. Soc. 55(3), 2001, 101-111.

Notice

Season Summary Update and Reorganization

Jim Tuttle

Season Summary Coordinator

The 2001 Season Summary is now at newsstands everywhere. The records from the past collecting season have also been incorporated into the on-line database which now contains 22,800 data points. The value of the database will continue to grow as we add to it each year. It was a great relief that our first year of updating the electronic database since it has been housed at the University of Arizona went off without a hitch.

After a great deal of discussion and the willingness of two Zone Coordinators to take on added responsibility, we have reorganized three of our reporting zones. Due to the broad geographic area, varied habitats, large number of contributors, and yeoman politicking by Coordinator Charles Bordelon, Jr., it was determined that Texas should stand alone as its own zone (Zone 6). Coordinator Ron Royer agreed to incorporate Oklahoma into Zone 5 (Great Plains States), and Coordinator Brian Scholtens agreed to incorporate Arkansas and Louisiana into Zone 9 (Southeast States). This particular plan of reorganization made the most sense, especially since Arkansas and Louisiana are treated by the Southern Lepidopterists' Society as part of their region. Fear not for Ron and Brian, as both will have their substantial Zone Coordinator salaries increased proportionally. So for those of you reporting from Louisiana, Arkansas, or Oklahoma in 2002, please make note of these changes.

continued on pp. 61

Tales...*continued from pp. 55*

atop a flower and fluttering or even simply fanning its wings, must appear as a flashing beacon to an approaching butterfly. After spotting the signal, the hungry vagrant homes in for a guaranteed feast. In essence, butterflies may be able to spot each other *more easily* than they can locate a flower—even those with telltale attractors.

In addition to the obvious economy of energy and time, social feeding may have another benefit: reduction in predation. Whether vertebrate or invertebrate, a predator lurking about a flower head will be able to seize only one butterfly per attack; all others can escape to live another day. And so, the principle of safety in numbers" probably applies to butterfly feeding groups as well. But one may argue, what about those predators flying overhead? Isn't a group of butterflies more obvious than a single individual?

I think not. Airborne predators on patrol prefer to attack winged insects that are also airborne. There are several reasons for this. First, since birds and dragonflies are unable to see in the ultraviolet range, these potential predators most likely are often unable to detect butterflies feeding within a complicated background of colors. Second, stationary butterflies are more difficult to grasp than those on the wing. Remember, for an attack on a butterfly to be successful, the predator must seize the body of the insect, not its wings (partially expendable).

While perched during feeding, a butterfly's body is very close to the flower. If the insect's wings are held vertically, they actually shield the body from above; and if the wings are horizontal, they present a broad, flattened surface that compliments the body, thereby making a precise body attack upon one individual butterfly from above very difficult.

Lastly, even if an attack is launched from overhead, only one butterfly could be grasped at the time—the same as with an attack launched from a perched predator. All others would scatter in an erratic maneuver to escape. All in all, social feeding most likely offers protection from many forms of predation.

In summary, I am of the opinion that social feeding in butterflies is much more common than previously suspected. Since the behavior has definite survival value for not only the individual but for the species as a group, then it must have evolutionary significance for butterflies in general. Obviously, this is fertile ground for future research. Perhaps the ever expanding interest in butterfly gardening will provide significant data. Go to it, fellow lepidopterists and butterflyers!

Sphingids in Flight

George O. Krizek

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Trying to photograph sphingids in the air—in natural habitats, not in a cage or a large fishtank, etc.—is much more difficult than photographing hummingbirds that come regularly to a feeder where one can use a tripod and other equipment. While, in the series of shots accompanying this article (see pp. 69), all of the photos were made with a flash, attempting to catch nectaring sphinx moths on film is generally much more difficult.

Some success can be attained if we have an abundance of flowers with small blossoms (e.g. *Buddleia*, *Lantana*, *Phlox*, *Mirabalis*, *Pontederia*, *Carduus*, *Cirsium* sp., etc.) available (see **Tropical Lepidoptera** 2(1): 43-51, 1991). Better results can be obtained by trying to photograph the day-flying sphinxes, however, most of the common diurnal sphingids are small species (e.g. *Macroglossum*, *Aellopos*, *Hemaris*, *Amphion* sp.) although there are also "medium-sized" sphingids that fly by day (e.g. *Hyles gallii*, *H. euphorbiae*, *H. lineata*).

It helps to photograph at flowers like *Buddleia*, *Lantana* and *Cirsium* sp., because the moths may hover in a small area nectaring from the small but locally abundant florets. Sphingids almost always hover above blossoms although there are rare exceptions (see **News**, No. 3, June 1988, pp. 50). Some smaller sphingids, e.g. *Hemaris thysbe* and *Aellopos clavipes*, appear to hold flowers with their forelegs while nectaring.

Usually we have little time to capture the larger sphinxes that prefer and stay at, as a rule, larger blossoms for only a few seconds. Even *Petunia* blossoms are usually too large. Small sphingids with a relatively short proboscis (e.g. *Hemaris*, *Aellopos*, *Amphion*, *Macroglossum* sp.) are also easier to photograph than large species with a longer proboscis (e.g. *Neococytius*, *Amphimoea*, and, to some degree, also *Agrius*) that places them further from the flowers. I've never been quick enough to get pictures of *Agrius (Herse) convolvuli*, *Hippotion esson*, *Nephelle comma*, etc. in Kenya.

The help of another person to inform the photographer that the moth is approaching the area can be quite useful. Removing the eye from the viewfinder usually does not leave enough time to refocus quickly enough to photograph most flying moths. Our reactions must be as quick as possible but even then we usually get a lot of "late" shots.

Trying to capture sphingids in flight is exciting for the photographer, who could be compared to a gambler throwing yet another coin into a slot machine several seconds before the inevitable disappointment that he didn't win (again). Still, the very rare good pictures are rewarding enough that, like the gambler, we continue to try, and try, and try, again.

Is *Battus philenor hirsuta* a subspecies?

Andrei Sourakov and Jaret C. Daniels

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In California, around the San Francisco area, there occurs an unusual subspecies of *Battus philenor*, named *hirsuta* for its hairy body. Those who have reared the species in the eastern United States would immediately notice the different appearance of *hirsuta* larvae from those of the nominative subspecies (see photos opposite). In eastern populations, the filaments on the thoracic segments of mature larvae are long and flexible: a larva moves them back and forth when crawling. In *hirsuta*, these filaments are shorter, stout, and pointed forward like those of *Battus polydamus* larvae.

In the past we have never experienced problems with hand-pairing adults of local *Battus philenor*, but when we decided to cross populations from the opposite coasts our experience was different. Multiple attempts to hand-pair locally caught males with females of *hirsuta* resulted in either complete failure, or in pairings that would break up after only a few minutes. Owing to such poor results, the reverse cross was attempted: a freshly emerged virgin female of *B. p. philenor* was successfully mated with a male of *B. p. hirsuta*. The resulting 27 eggs were 100% fertile. Larvae fed on *Aristolochia macrophylla*, but refused *A. serpentaria* (the primary host of *B. philenor* locally), which proved toxic to them. Hybrid larvae were similar to those of California populations. All larvae were reared individually in separate plastic containers to avoid the possibility of disease. Throughout development, they appeared healthy and grew rapidly until pupation.

Unfortunately, none of the larvae pupated successfully. We have reason to suspect that the mortality resulted from genetically determined non-viability of the hybrids, rather than infection. Unsuitable host plant availability might have also been a factor, although the vigor of all larvae until pupation suggests otherwise: all larvae appeared healthy until the pre-pupal stage, but died shortly after attaching themselves with a girdle. *Battus philenor hirsuta*, therefore, may prove to be reproductively isolated from the nominative subspecies.

The authors may also be contacted at ***sourakov@gnv.ifas.ufl.edu*** *and* ***JDaniels@ButterflyKingdom.com*** *respectively.*

A *Limenitis* sp. Hybrid from Missouri

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The accompanying photo (opposite), courtesy of Charles Laun, depicts an apparent hybrid between a Viceroy, *L. archippus* (Cramer), and a Red-Spotted Purple, *L. arthemis astyanax* (Fabricius), captured May 5, 2000 at Hartsburg Access, southern Boone Co., Missouri. It was taken by Linden Trial while conducting her annual butterfly count. The specimen is in my collection and greatly resembles that taken in Mississippi by Schiefer (News, 41(4): 99) and a second specimen taken by him and illustrated in color in News 42(1): 29. My specimen is much bluer than those illustrated from Mississippi, tending to more resemble the Red-Spotted Purple in coloration. A similar specimen was taken by David Esterla in the early 1950's, 30 miles south at Gravois Mills, MO, and was deposited in the Enns' Museum of Entomology, University of Missouri-Columbia.

Books...*continued from pp. 59*

cusses seasonal changes in the fauna and provides a phenogram for the entire fauna.

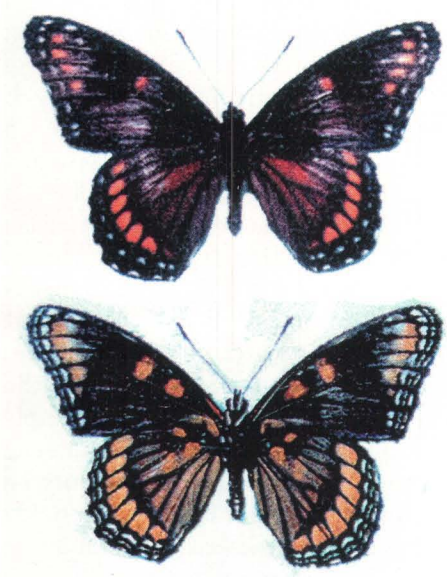
The book is completed by a useful set of appendices providing range maps for 20 sp. found in the adjacent regions that are not represented in BC, a complete species/subspecies checklist, *complete* data for all of the photographs and genitalia drawings, and a reprint of the Lepidopterists' Society's Statement on Collecting Lepidoptera with which we are all familiar. This is followed by a useful glossary, an extensive bibliography, photo credits and a complete index.

The production of the book is exemplary and I could find nothing to fault. The case binding is very good and should stand up to rigorous use. The color photos are crisp and clean but are, at times, a bit smaller than I might have preferred. My only real complaint is that I'd like a smaller version to take into the field whenever I'm in the northwest—with recent events surrounding air travel I'd be hard-pressed to be able to include this large tome in my luggage! I hope that the authors are entertaining an abridged field guide or maybe a CD-ROM version of their precedent-setting book.

Phil Schappert

Integrative Biology, University of Texas, Austin, TX 78712-1064

Top, left to right: *Battus philenor hirsuta*, adult; thorax and head of a typical *B. p. philenor* larva from Florida; thorax and head of *B. p. hirsuta* caterpillar from Califronia. Photos by Andrei Sourakov. See article on opposite page.



Left: Red-Spotted Purple/Viceroy hybrid caught May 5, 2000 in Missouri. Dorsal, top, and ventral, bottom. Photos by Charles Luan.

Aberrant Stamps!? See letter on pp. 47.

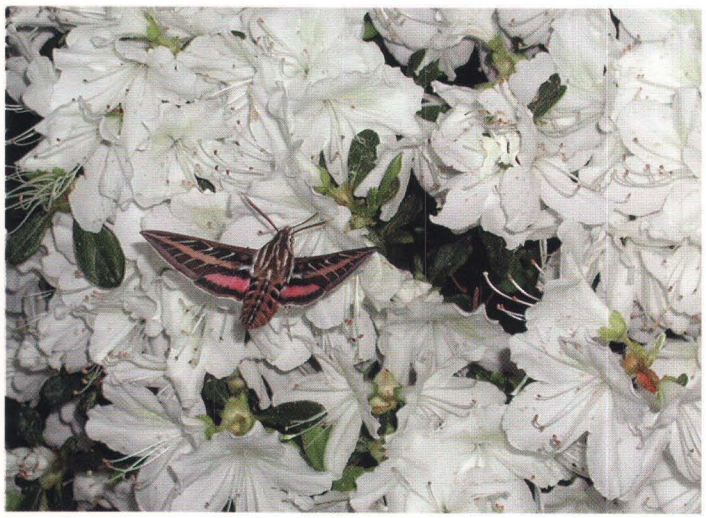


Photo by Betty Brown. See her letter on pp. 51.

Photo by Gary Noel Ross. See his letter on pp. 46-47.

Did the Queen (*Danaus gilippus* Cramer) Invade the Northeastern U.S. in 2001?

David P. Moskowitz

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There were unprecedented, or at least previously undocumented, occurrences of the Queen butterfly (*Danaus gilippus* Cramer) in the northeast during the summer of 2001. In July and August there were five confirmed reports, two in New York (NABA 2001), one in New Jersey (Moskowitz 2001) and two in Washington, D.C. (Durkin 2001). These reports represent the first New York, New Jersey and District of Columbia records for the species (Clark 1932; Gochfeld and Burger 1999; Opler 1995, 1998; H. Pavulaan, pers. comm.). Prior to 2001, there were only two reliable reports of the Queen north of North Carolina: a record from Nantucket Island, Massachusetts in 1934 (Jones and Kimball 1943) and another from Jamestown, Rhode Island in 1998 (H. Pavulaan, pers. comm.). An additional report of an ovipositing female from northeastern Massachusetts in 1999 is considered unverified (H. Pavulaan, pers. comm.). A summary of the Queen reports is provided in Table 1.

The descriptions, photographs and sighting dates of the 2001 records appear to indicate that there were at least four different butterflies observed. It has been suggested that the two Washington, D.C. reports, both of which were of a fresh female, may have been of the same individual (Durkin 2001), but detailed descriptions and photos are apparently lacking to make a definitive determination.

All of the 2001 records are well north of the typical range of the species. They may indicate either an unprecedented invasion (or at least the first documented one), a normal, but previously unnoticed occurrence, or perhaps another phenomenon that might be related to escapes from live butterfly exhibits, releases from weddings or schools, or individuals transported on vehicles or nursery stock (M. Gochfeld, pers. comm.). Unfortunately, the profusion of live butterfly exhibits and the possibility of butterflies escaping from them, the popularity of butterfly releases, and the vast movement of horticultural stock throughout the country, confound the ability to determine the origin of these extralimital sightings.

In New Jersey, a southern host plant for the Queen, Scarlet or Mexican milkweed (*Asclepias curassavica* L.), has been observed for sale as an ornamental and could conceivably harbor eggs, larvae, or pupae that might result in extralimital sightings (M. Gochfeld, pers. comm.). Interestingly, the Queen observed in Washington, D.C. on August 24, 2001 was nectaring on this plant in the National Arboretum's Herb Garden (Durkin 2001). However, H. Pavulaan (pers. comm.) has suggested that it is extremely unlikely that all of the 2001 reports can be attributed to human-assisted means (suggesting that the odds of multiple sightings in multiple locations of accidentally displaced butterflies would almost certainly be astronomical), and instead, probably reflect the vast increase in the number of observers (= butterfly watchers), and a concomitant ability to document small numbers of butterflies that previously would have gone unnoticed.

Notwithstanding the possibility that the 2001 reports may be related to human-assisted means, the Queen is a strong flier and records of presumable vagrants have been recorded on Bermuda (Scott 1986), in southwestern Ohio, throughout the Mississippi River Valley, and as far north as southern Michigan (A. Grkovich, pers. comm.) and North Dakota (Opler 1998). Given the unprecedented number of reports in 2001, their distribution across nearly 300 miles, and their consistency with the dates of the historic records that are

Table 1. Historical reports of the Queen butterfly (*Danaus gilippus* Cramer) in the northeastern United States.

Date	Location	Condition	Sex
July 8, 1934	Nantucket Island, MA	Good	NR
August 4, 1998	Jamestown, RI	NR	NR
July 7, 1999	Topsfield, MA	Slightly worn	Female
July 17, 2001	East Windsor, NJ	Good	Male
July 21, 2001	Oyster Bay, NY	Tattered	NR
July 22, 2001	Montgomery, NY	Good	Male
August 24, 2001	Washington, D.C.	Good	Female
August 27, 2001	Washington, D.C.	Good	Female

NR –not reported. See text for citations.

accepted as legitimate vagrants, it seems at least possible, if not likely, that the 2001 records may represent an actual invasion. Numerous other butterfly species regularly invade the northeastern and mid-Atlantic states during the summer from more southerly areas (Gochfeld and Burger 1997; Shapiro 1974; Woodbury 1994) and the 2001 Queen reports may represent a similar phenomenon.

It is well documented that the Queen periodically strays north of its normal range in the southeastern United States, and it is possible that the 2001 records may be related to these events. There are numerous reports of the Queen as far north as the central and southern counties of North Carolina (Burns 1983; H. Pavulaan, pers. comm.). Most of the records are of single, or just a few individuals, but occasionally the Queen is common to abundant in these areas, likely reflecting a heavier than normal northward movement from more southerly areas (Burns 1983; H. Pavulaan, pers. comm.). It may be these heavier events that result in Queen sightings in the northeast in the summer. At least two of the 2001 records (New Jersey and Montgomery, New York) were of the southeastern subspecies of the Queen (*Danaus gilippus berenice*) enhancing the possibility that these individuals originated in the southeastern United States. This subspecies has a range that extends in a broad arc from North Carolina south through the gulf-states to the Mississippi River (Howe 1975; Klots 1951; Opler 1995, 1998; Scott 1986).

It will be interesting to see if the Queen will continue to be reported from the northeastern and mid-Atlantic states in subsequent years. It is recommended that all sightings in the eastern United States be submitted to the North American Butterfly Association (***www.naba.org***) and the USGS Butterflies of North America (***www.npwrc.usgs.gov***) websites so there are centralized and easily accessible locations for the information. If possible, the butterflies should be determined to subspecies to narrow the possible place of origin. Careful analysis of future sightings may provide an answer as to whether the 2001 records are related to an unusual invasion, a common, but previously undocumented event, or to human-assisted means.

Acknowledgments

Thanks are due EcolSciences, Inc. for providing the opportunity, time and financial support to prepare this work and to Phil Schappert for his encouragement. I am also grateful to Harry Pavulaan, Michael Gochfeld, Jim Springer, and Alex Grkovich for sharing their extensive knowledge and insight about the distribution of the Queen butterfly and to Patricia Durkin, Alan Fox and Rich Kelley for providing the details of their Queen sightings.

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Announcement...

Basic Techniques for Observing and Studying Moths & Butterflies

by William D. Winter.

Lep. Soc. Memoir #5 is a 350-page book (with 82 pages of Appendices) packed with information for study of Lepidoptera. Both beginners and experienced students of Lepidoptera will find this book to be a valuable reference.

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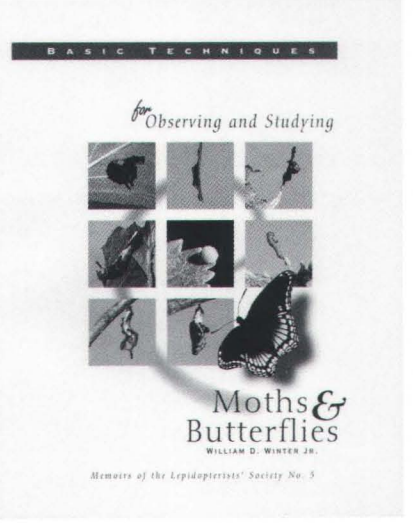
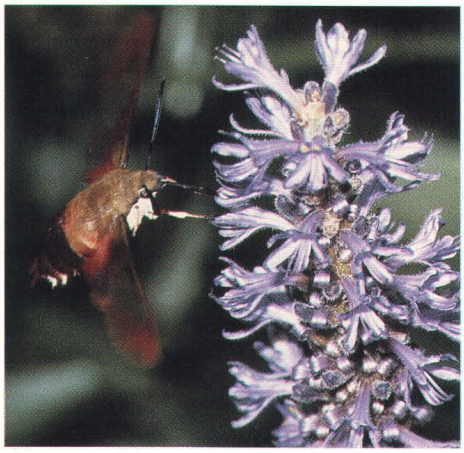


Social Feeding Butterflies...

Left: Fritillaries and American Painted Lady at Pale Coneflower. Below, left: Monarch, Fritillaries and Sulphur at Milkweed. Below right: Fritillaries and Spicebush Swallowtails at Butterfly-weed. Bottom, right: Monarchs, Fritillaries, Silver-Spotted and Hoary Edge Skippers at Ironweed. All photos by Gary N. Ross. See the article on pp. 55.

Left: New Jersey Queen, *Danaus gilippus*, photographed by David Moskowitz. Note the scale wear on the upper forewings. See the article beginning on pp. 66. These photos originally appeared in black and white in **News** 43(3): 72.





Sphingids in Flight.

Left, top to bottom: *Hyles lineata* at *Buddleia*, 9/VIII/99, AZ; *Hemaris thysbe* at *Pontedaria cordata*, 24/VII/86, MD (note forelegs holding blossom); *Amphion floridalis* at *Phlox*, 5/IV/02, FL; *Hippotion celerio* at *Mirabilis*, 3/I/85, Kenya. **Center, top to bottom:** *Macroglossum stellatarum* at *Lantana*, 31/VIII/86, Croatia; *Hemaris diffinis* at *Pontedaria cordata*, 31/VII/87, MD. **Right, top to bottom:** *Aellopos clavipes* at *Buddleia*, 9 VIII/99, AZ; *Hemaris fuciformis* at *Buddleia*, 19/VII/80, France. All photos by George Krizek. See the article on pp. 63.

Stranger Attractor...

Right: Photo and drawing enlargement (by Liam O'Brien) of a Pale Tiger swallowtail, *Papilio eurymedon*, visiting bright red fish-eggs. See Liam's letter on pp. 47.

Membership

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

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Submissions are always welcome! When space becomes limiting, preference is given to articles written for a non-technical but knowledgable audience, illustrated, written succinctly, and under 1,000 words. Please submit your article or item in one of the following formats (in order of preference):

1. Electronically transmitted file in ASCII or other acceptable form *via* e-mail.

2. Article on high-density floppy diskette or Zip disk in any of the popular formats. You may include graphics on disk, too. Indicate what format(s) your article is in, and call if in doubt. Include a printed hardcopy and a backup in ASCII or RTF (just in case). All disks will be returned upon request.

3. Typewritten copy, double-spaced suitable for scanning and optical character recognition. Artwork should be line drawings in pen and ink or good, clean photocopies suitable for scanning. Originals are preferred.

4. Handwritten or printed (very legible, short pieces only please, <500 words).

Submission Deadlines

Material for Volume 44 must reach the Editor by the following dates:

Issue	Date Due
1 Spring	you missed it!
2 Summer	gone by!
3 Autumn	**Aug. 31, 2002**
4 Winter	Oct. 26, 2002

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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2001 Photo Contest: Butterflies, 3rd place. American Painted Lady, *Vanessa virginiensis,* Akito Kawahara.

2001 Photo Contest: Larvae, 2nd place. *Copaxa multifenestrata,* Leroy Simon.