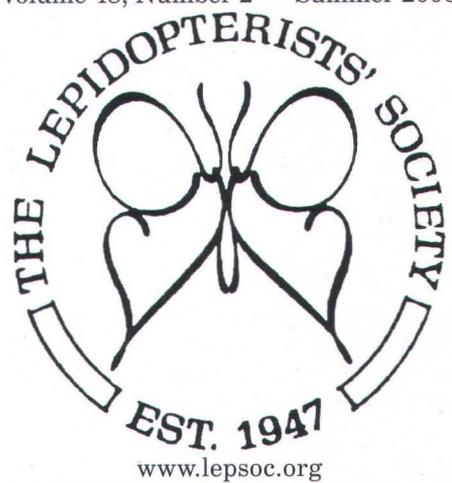


# NEWS

OF THE

# LEPIDOPTERISTS' SOCIETY

Volume 48, Number 2 Summer 2006



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in Ecuador**

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# NEWS OF THE LEPIDOPTERISTS' SOCIETY

Volume 48, No. 2 Summer 2006



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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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## Front Cover:

*Asterope markii* (Nymphalidae: Biblidinae), Yasuni National Park, Ecuador.  
Photo by Steve Graser.

# The Yasuni Research Station in Yasuni National Park, Ecuador

Steve Fratello

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Having spent hundreds of days in Guyana's lowland rainforests (which are separated, for the most part, from the Amazon Basin by uplands of the Guianan Shield) and three months in southern upper Amazonas (Tambopata River, Peru), I planned a short trip to northern upper Amazonas to compare the lowland forests from this Amazonian subregion with the two subregions in which I had experience. As a lepidopterist, comparing the butterfly faunas was a major part of this examination.

The Yasuni Research Station (YRS) in Yasuni National Park, Ecuador was picked because of its immediate access to extensive tracts of pristine rainforest, frontage on a medium-sized river (Tiputini River), a developed trail system and very reasonable cost. The seventeen days I was there (Nov 23-Dec 9) provided many sunny days typical of the dry season in this part of Amazonas at this time of year. As tropical rainforests are renowned for their staggering variety of life forms, and as the Amazon is renowned as having far greater diversity, generally, than other tropical lowland rainforests, as upper Amazon sites (close to the Andes) have proven so far to be some of the richest sites in Amazonia, I was expecting quite a show at Yasuni. What I saw in my short/long seventeen days at Yasuni could fill a few volumes; what I didn't see would not be exhausted in an infinite lifetime's volumes. What follows are a few lepidoptera highlights from a short sojourn into glorious upper Amazonas.

## A Very Unusual Feeding Behavior

In the United States, where most of my experience with temperate zone lepidoptera has occurred, I believe it is

safe to say that butterflies taking nectar from flowers is the predominant feeding behavior observed. Tropical rainforests with their far richer butterfly fauna, not surprisingly, exhibit a richer assortment of butterfly feeding behaviors. Involving many more species and observed much more frequently are tropical rainforest butterflies utilizing the following food sources: juices from rotting fruits; exudates from tree trunks and lianas; fecal matter, including bird droppings; and even carrion and some other specialized food sources for certain butterfly groups. Prior to my visit to Yasuni, the strangest tropical rainforest butterfly feeding behavior I was aware of was from a photo in a rainforest book. In this stunning photo, a butterfly (I can't remember the species) was feeding on minerals from the secretions of a caiman's eye! In my approximately 1,000 days experience in the world's tropical rainforests, I had never seen such a feeding behavior. Yasuni provided the opportunity for me to witness an analogous feeding behavior.

On three separate occasions, I saw butterflies feeding from secretions from the eyes of Amazonian River Turtles. At the two lagunas (oxbow lakes) near the YRS, these turtles were easily observed as they sunned themselves on exposed logs and fallen large branches on the lakes' edges. On one such sunning perch, I counted 16 turtles, mostly crowded end to end! At the second laguna, where I spent numerous hours on a lake-edge log that provided a great vantage point for a simply spectacular butterfly and bird show around and over this large forest opening, I witnessed an amazing example of the above mentioned feeding behavior. Up to five individual butterflies were observed

feeding at one time at the eyes of one large sunning turtle: three *Callicore cynosura* Doubleday (Nymphalidae: Biblidinae), a single *Phoebis argante* Fabricius (Pieridae) and a single *Glutophrissa drusilla* (Pieridae). Though butterflies and turtle were motionless for periods of time, unseen causes seemed to agitate the butterflies at times. Following the agitation, the boisterous flight of *P. argante* and *G. drusilla*, very close to the turtle's head and eyes, seemed to disturb the turtle. At least once the turtle took the plunge to rid itself of the feasters but after a few minutes, when it climbed back onto a nearby sunning spot, at least a few of the former feeders were waiting for it. That one turtle was singled out as a food source, when numerous turtles were exposed and available, suggests that eye secretions of some turtles are more attractive than others as butterfly food sources. On two other occasions I saw the same feeding behavior: a single *Dryas iulia* Fabricius (Nymphalidae: Heliconiinae) and a single individual of most probably the same species (too far off to get a definite determination).

## Incredible Riverside Congregations

A feeding behavior purposely not mentioned above is lepidoptera taking minerals from moisture, in nature, most typically along the edges of watercourses and lakes. Even in temperate regions, the congregations that ensue from a good mineral source, can be spectacular; though I am not aware of temperate congregations coming close to the variety and numbers of some tropical rainforest congregations. In tropical rainforests, rivers and large creeks which produce

*continued on pp. 38*



### Yasuni National Park, Ecuador

**Above:** Tiputini River, Yasuni Research Station, where on the muddy river bank in the foreground, phenomenal lepidoptera congregations were attracted to and fed at the urine soaked sand. Photo by Steve Fratello. **Below:** *Heraclides anchisiades* (Papilionidae) probing the damp ground for nutrients. Remaining photos by Steve Graser. More photos accompanying this article may be found on pages 60, 61 and 64.



**Above:** *Melete lycimnia* (Pieridae: Pierinae), male, puddling on the shores of the Tiputini River.



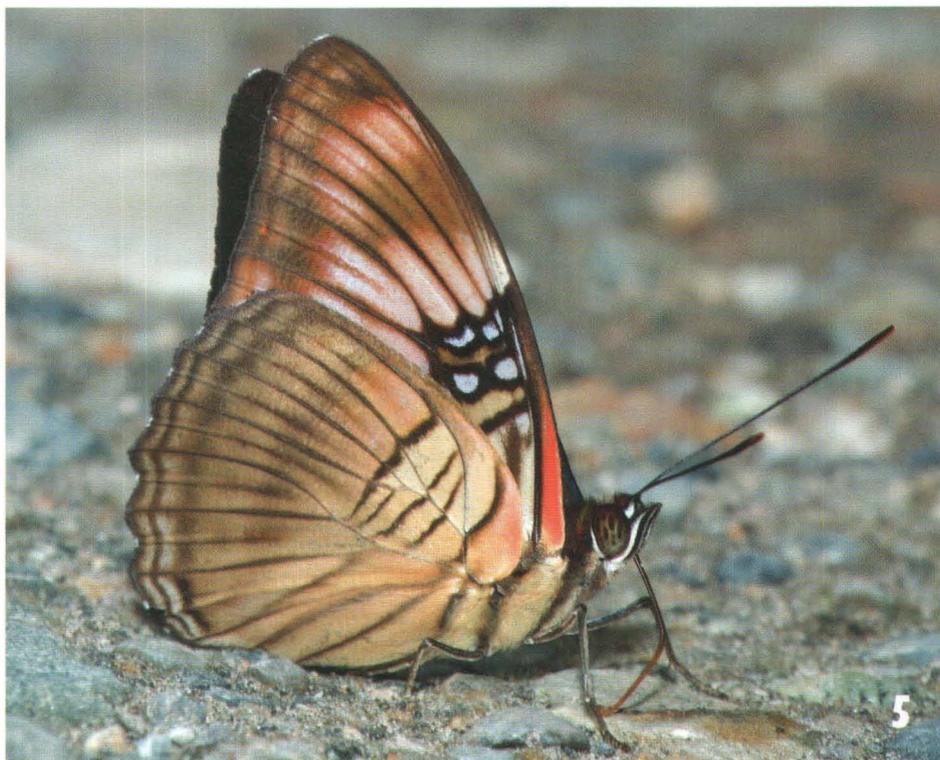
**Above and below:** dorsal and ventral views of *Doxocopa agathina* (Nymphalidae: Apaturinae) male.





### Metallic greens and wings of red...

The sands of the Tiputini River at the Yasuni Research Station when appropriately “baited” were a focal point for a wide range of species. 1) *Philaethria dido* (Heliconiinae); 2) *Gorgopas* sp. (Hesperiidae: Pyrginae), male; 3) *Dynamine chryseis* (Nymphalidae: Biblidinae), male; 4) *Adelpha mesentina* (Nymphalidae: Limenitidinae), dorsal view; 5) *Adelpha mesentina*, ventral. All photos by Steve Graser.



**Yasuni...**continued from pp.35

large forest openings and therefore the possibility of abundant sunshine, provide forest-edge habitat for many species: *Papilio*, *Eurytides*, *Graphium* (Papilionidae), many Pieridae, many Nymphalidae and some Old World Polyommata (Lycaenidae) which are rarely or never seen in the forest interior. These same butterflies, along with some Hesperidae, are the most common and prominent members of feeding assemblages at mineral sources on tropical rainforest riverbanks.

At YRS, the banks of the Tiputini River would be the optimum place to seek these congregations, especially in the dry season like when I was there, with the river level very low and consequently large areas of exposed muddy riverbank. A few hundred meters upriver from the YRS (Fig. 1) and easy access from the Laguna Trail was such a place. Tropical lepidopterists are aware that human urine is a very strong attraction for many species in these open sunny areas, as undoubtedly is the urine of rainforest mammals which deposit their waste products on the banks of large watercourses. With this in mind, on two separate days I urinated on the mud close to the Tiputini. Though expecting good results because of the dry season weather and low river level, I was not expecting the incredible congregations that ensued. Both days accounted for the most spectacular congregations I have ever seen: at times close to 30 species were present and on both days up to nine Pierid species were present at the same time.

The following species were recorded: Papilionidae - *Heraclides anchisiades* Esper (this species or a close relative), a pair of male *Parides* (probably *P. anchises* Linnaeus or *P. vertumnas* Cramer), *Eurytides dolicaon* Cramer, *Protographium thyastes* Drury, *Protesilaus telesilaus* C. Felder & R. Felder, *Mimoides ariarathes* Esper (probably this species), Pieridae - *Enantia lina* Herbst, *Pseudopieris* species, *Melete* species, *Perrhybris*

*pamela* Stoll (most probably this species and possibly also *P. lorena* Hewitson), *Itaballia demophile* Linnaeus, *Glutophrissa drusilla* Cramer, *Hesperocharis nera* Hewitson (possibly this species or another *Melete* species??), *Phoebis argante* Fabricius, *P. philea* Linnaeus, *Rhabdodryas trite* Godman & Salvin, *Aphrissa statira* Cramer, Heliconiinae - *Eueides alipha* Godart, *Philaethria dido* Linnaeus (or a close relative), Nymphalinae - a large mimetic (tiger-striped) *Eresia* (probably this genus), Biblidinae - *Temenis laothoe* Cramer, *Diaethria* species, *Marpesia chiron* Fabricius, *M. berania* Hewitson, *M. petreus* Cramer, Limenitidinae - *Adelpha epione* Godart and one or two other *Adelpha* species, Apaturinae - *Doxocopa agathina* Cramer, *D. pavon* Latreille, *D. linda* C. Felder & R. Felder (probably this species or *D. laure* Drury?), Riodinidae - *Exoplisia cadmeis*, Lycaenidae - a hairstreak species, Hesperidae - a few species including a spectacular Pyrrhopyginae species, Uraniidae - *Urania leilus*.

For many hours on both days, standing a short distance away and using a great pair of binoculars, I revelled in watching so many beauties in close proximity. On the first day, a solitary *Marpesia egina* Bates (most probably this species) fed on the river bank upriver from the congregation, which would account for four *Marpesia* species seen feeding at the river bank. On the second day, a solitary *Battus crassus* Cramer (Papilionidae) flew by and investigated the situation but never landed. The above mentioned hairstreak, a species I had never seen before, was amongst the congregation for a short time whence it flew to my muddy boots and probed the mud for sustenance. Though I have seen a Neotropical hairstreak (*Ostrinotes tarena* Hewitson) come to rocks along Guyana watercourses and had collected a couple of *Hypolycaena sipylus* Felder feeding creekside in northern Sulawesi, I had never before seen a Neotropical hairstreak feeding on minerals from mud or moist sand. Another behavior

of note was how, at times, the Pierids segregated in the feeding congregation: *Melete*, *Perrhybris*, *Itaballia* and *Glutophrissa* (Pierinae) would feed in one group and *Phoebis*, *Rhabdodryas* and *Aphrissa* (Coliadinae) would feed together in another group. I can't believe this was just coincidence.

At these incredible congregations, everything was a highlight, especially seeing three *Doxocopa* species feeding in close proximity. The exquisiteness of the swordtail Neotropical Leptocircini is always a highlight for me whenever they are encountered. On the first day, returning to the riverbank and feeding congregation after a foray back to the forest, I spied a large brown and yellow swallowtail approaching the congregation. Because of the coloration and size, I immediately thought *Heraclides thoas* Linnaeus or *H. androgeus* Cramer, two Neotropical swallowtails which feed along watercourses. Closer inspection revealed it was the incomparable *P. thyastes* complete with rapier-like tails dipped in golden yellow. Even a small congregation of gorgeous uranias on the second day, could not, for me, match the sublimity of this recently emerged, swordtail.

On the second day, a tropical downpour that seemed to come out of nowhere chased me back to the research station. When I returned to the congregation spot late in the afternoon, I was not expecting to see much. Still feeding were two species of smaller diurnal moths. One, an arctiid(?), was common along the river and is a brilliant deep yellow with jet-black wing margins scalloped along the inner edge. I will never forget two days of unbelievable lepidoptera congregations along the Tiputini.

### **A Light Gap and Feeding Cobalt-Winged Parakeets**

In the rather open seasonally inundated alluvial forest on the laguna trail, there was a spot that continually had a

multitude of butterflies present when visited on numerous mornings. The open nature of the forest plus a large tree that had fallen in this spot provided an arena where when sunny weather prevailed, brilliant sunshine slanted in to a large area; this factor coupled with bird droppings from Cobalt-Winged Parakeets (*Brotogeris cyanoptera*) feeding on fruits in an epiphytic or hemiepiphytic fig above the light gap accounted for this very rich butterfly locale. Satyrines, ithomiines and nymphalines were all numerous. Satyrines found in this spot included three *Pierella* species, a *Cithaerias* species, *Haetera piera* Linnaeus, a few *Taygetis* species and a number of 'euptychiines'. Among the 'euptychiines' was an individual of what I believe was a *Splendeptychia* species and which I didn't see elsewhere at Yasuni. Also present was the delightful, small blue *Caerulepychia pilata* Butler. With diagnostic yellow around some of its ventral submarginal black ocelli, this little beauty was occasional in the alluvial forest but not seen by me in the undulating terrain around YRS.

The most common ithomiine here was a small clearwing with its transparent hindwing patches diffused with white scales. My uncertain memory recalls this species feeding on bird droppings. My guess, because of the bird droppings, an individual *Epiphile orea* Hubner (Biblidinae) visited the area one day. In my vast Neotropical experience, I had never seen a single *Epiphile* and was surprised to see one in lowland alluvial swamp forest, having read in literature that they are mostly submontane and montane butterflies. Checking literature after the trip, *E. orea* is known as a submontane and montane species in northern S. America.

The light gap was a great place for *Adelpha*, at least four species seen in the area, including the handsome dark brown and white *A. epione* and a species with solely orange forewing bands dorsally and a gorgeous rayed pattern on the ventral hindwing

(uncertain memory leads more to *A. mesentina* Cramer than *A. lycorias* Godart).

An aberrant Charaxinae species also visited the spot but was flying mostly in the low understory of nearby forest. A couple of mimetic *Consul fabius* Cramer, with their slow, lazy flight (undisturbed flight manner), certainly reminded one of large tiger-striped ithomiines or heliconiines. If watched closely in flight though, it was fairly easy to discern that these butterflies were not ithomiines or heliconiines. At least one *Memphis* species visited the area and I believe another *Memphis* relative also.

A great light gap, especially coupled with bird droppings, should lead to good variety and numbers of skippers present. Hesperids were not great in numbers or variety during my Yasuni stay, probably a seasonal phenomenon; so maybe it shouldn't have been a surprise, when less than expected numbers of skippers were seen in this great butterfly spot. Lack of numbers was made up by the sight of a real jewel. I believe attracted by the bird droppings, a small brown suspected Pyrginae revealed brilliant, glittering green iridescence on the basal portion of its spread wings. Because of this glittery green iridescence and similar size, this skipper was very reminiscent of riordinids of the genus *Caria*.

### A Plethora of Ithomiines

I was expecting great butterfly diversity in only my second visit to upper Amazonia and of all the groups, this was most apparent with the ithomiines. I estimate 20-30 species seen, probably more, during my 17 day stay and also in good numbers. I believe I saw more ithomiine species at Yasuni than during my three month stay at Tambopata, Peru. But for most other butterfly groups, even for an equivalent period of days, Tambopata seemed quite a bit richer than Yasuni. I'm sure part of this discrepancy in comparative richness had to do with seasonal or other factors and does not represent an accurate gauge of comparative total diversity of

the two areas. A highlight was seeing four species of ithomiines feeding from a small sprig that had fallen to the forest floor, up to three species at one time. Three of the species were small clearwings, the fourth somewhat larger and having its transparent wings yellow-tinged. No doubt they were probing the sprig for pyrrolizidine alkaloids which are theorized to be used by the butterflies for multiple purposes. This represents one of the specialized feeding behaviors for certain butterfly groups mentioned above; pyrrolizidine alkaloids are also utilized by danaines, which are close relatives of ithomiines.

### Gorgeous Nymphalines

There are no more beautiful nymphalines in the Neotropics, if not the world, than the few species in the genus *Panacea* (Biblidinae). The combination of uppersides with shining blue and green iridescence and the richly toned undersides is almost too marvelous to behold. I have never seen even one during hundreds of days exploring Guyana's lowland rainforests and saw a few during my three months at Tambopata. *Panacea prola* Doubleday was fairly common in undulating terrain around the YRS, invariably found on the low ridges and slopes rather than in the ravines. I don't believe I saw any in the alluvial forest by the Tiputini.

I had the good fortune to spend four days hiking and exploring in the Primate Research Area (PRA), which is a moderate distance from YRS. The terrain there has more relief than the undulating terrain around YRS, the highest ridge rising 100m or so above its surroundings. A light gap on this ridge top had a good amount of butterfly activity from early to mid-afternoon on all four days I was there. Before I witnessed the aforementioned congregations along the Tiputini, my lepidoptera highlight at Yasuni took place at this light gap. In the early afternoon, I saw *P. prola*, another *Panacea* species (*P. regina* H.W. Bates

*Continued on pp. 44*

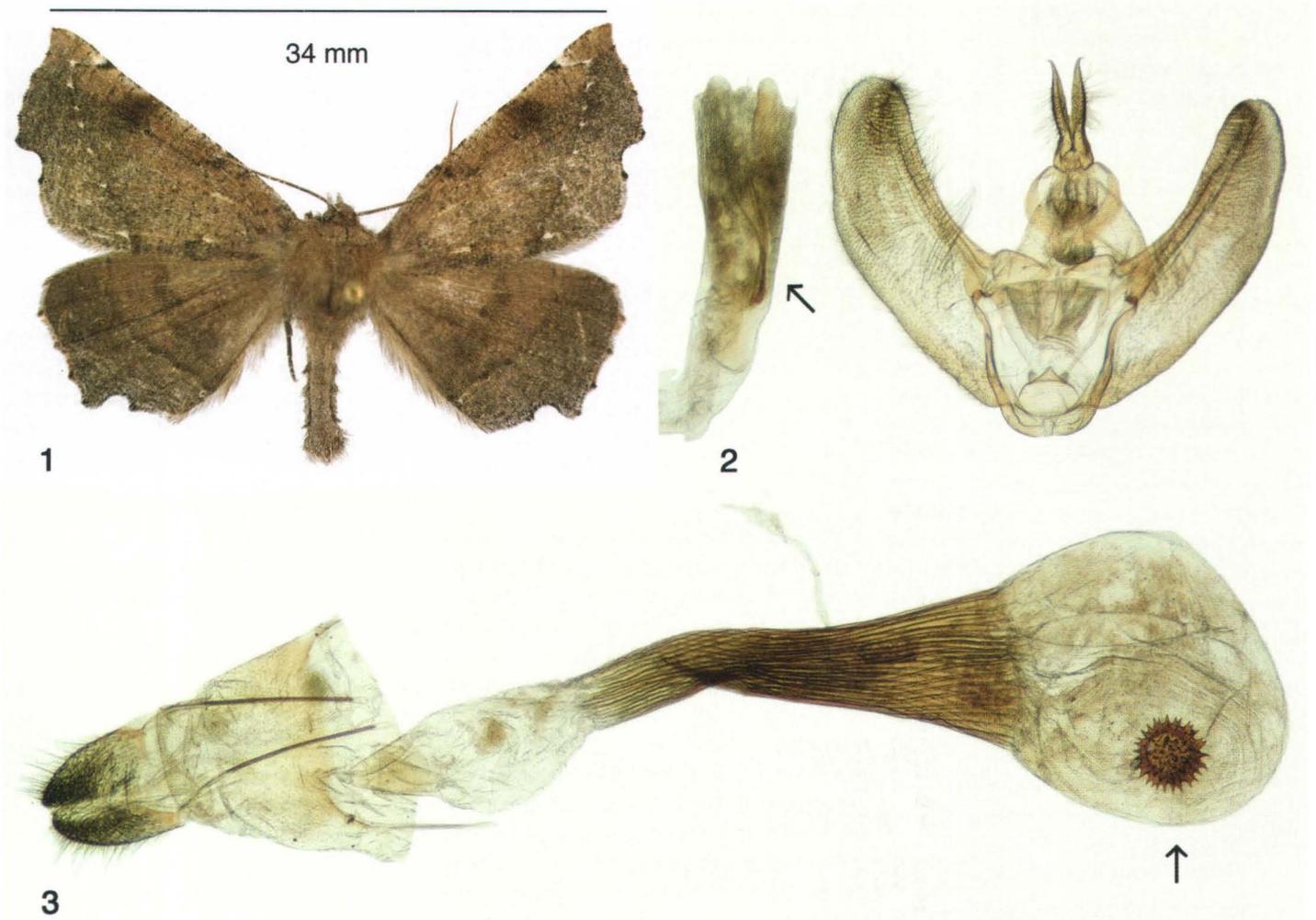


Fig. 1 Typical male specimen of *P. peccataria*. Fig. 2 Male genitalia, arrow points to cornuti. Fig. 3 Female genitalia, arrow points to signum.



Left: Larva of *Papilio palamedes leontis* on *Litsea pringlei*. Above: Adult *P. p. leontis* at rest. Photos by Krushnamegh Kunte.

# Arizona *Phyllodonta* Revisited (Geometridae)

Clifford D. Ferris

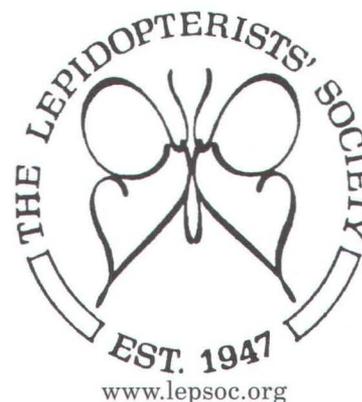
5405 Bill Nye Avenue, R.R. #3, Laramie, WY 82070

Following the publication of our *Phyllodonta* note in the spring 2006 issue of the NEWS [Ferris & Walsh 48(1): 23, 25] J. B. (Bo) Sullivan wrote to Ferris that the genitalia of *Phyllodonta sarukhani* Beutlespacher don't agree with the characters described for the genus by Pitkin, 2002. The male genitalia of *Phyllodonta* are characterized by a bifurcate uncus (really socii) and cornuti in the vesica of the aedeagus shown in Fig. 2 for *P. peccataria* (Barnes & McDunnough). All female genitalia have a prominent circular scobinate signum (Fig. 3).

Consequently *P. sarukhani* belongs in a genus different from *Phyllodonta*. It remains to be ascertained if it belongs in an existing Neotropical genus or if a new genus is required. The accompanying plate illustrates the genitalic characters of *Phyllodonta* and apparently the first images for *P. peccataria*.

## Literature Cited:

Pitkin, L. M. (2002) Neotropical ennomine moths: a review of the genera (Lepidoptera: Geometridae). Zool. J. Linn. Soc. 135: 121-401.



# *Litsea pringlei*: Host plant of *Papilio palamedes leontis* in Parque Ecologica Chipinque, Nuevo Leon, Mexico

Krushnamegh Kunte

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The nominate race of the North American *Papilio palamedes* [Drury] (Palamedes Swallowtail) occurs in swampy woodlands of southeastern United States. Its larvae commonly feed on *Persea borbonia* ("redbay", family Lauraceae). However, larval host plants of the Mexican subspecies, *P. p. leontis* Jordan & Rothschild, which occurs in the states of Nuevo Leon and Tamaulipas, have not been reported.

In October 2005 I discovered four caterpillars of *Papilio p. leontis* on *Litsea pringlei* (= *L. novoleontis*, Lauraceae; Allen 1945) on the road from La Manzanita to Delicias in Parque Ecologica Chipinque near Monterrey, Nuevo Leon, Mexico. I

could not collect and rear the caterpillars, but the plant was confirmed in March 2006 as the larval host of *P. p. leontis* when I saw a female lay an egg on the plant in Chipinque. Another laurel species – *L. parvifolia* – also occurs in the mountains around Monterrey, but there is taxonomic uncertainty regarding whether these species represent a complex of species. However, it is yet unknown whether *P. p. leontis* uses this or any other *Litsea* as larval hosts in addition to *L. pringlei*.

I would like to thank the staff at Parque Ecologica Chipinque, particularly Lillian Willcockson, Larisa Loya and Nydia Rivas, for kindly helping me

during my two visits there. Thanks are due to Dan Hardy who identified caterpillars, and Patricia Soriano and Tom Wendt for help with identification of the host plant.

## References:

Allen, C. K. 1945. Studies in the Lauraceae, VI: Preliminary survey of the Mexican and Central American species. Journal of the Arnold Arboretum, 26:365-434.

# Membership Update...

Julian Donahue

This update includes all changes received by 19 May, 2006.

## "Lost" Members

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

**Lopez Robio, Andres** (Medellin, Colombia)

## New and Reinstated Members:

(members who have joined/renewed/been found/or rescinded their request to be omitted since publication of the 2004 Membership Directory (not included in the 2004 Membership Directory; all in U.S.A. unless noted otherwise)

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# Thoughts on Voucher Specimens

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Voucher specimen is a term that we hear more and more often, but far too often the usage is incorrect and/or the term is abused. On the other hand, the important practice of actually collecting and designating voucher specimens may not be practiced often enough. Voucher specimens are equally important to the collector and the non-collector alike. The Society's statement on collecting Lepidoptera but briefly mentions voucher material in a single place. Among the seven purposes for collecting, this statement includes guideline 1.2 "To document regional diversity, frequency and variability of species, and as voucher material for published records." This very brief mention seems inadequate to me. It would seem far better, in my opinion, to include a definition of voucher specimen, along with recommended rules, procedures and guidelines for both handling and depositing them. In addition the Society publications should have stronger published policies regarding voucher specimens.

## What are Voucher Specimens?

Vouchers are permanently archived wildlife specimens with their associated data. In order to provide permanent documentation, it is essential that voucher specimens are specified and deposited in secure research or museum collections where they will be available to future researchers. In published studies, voucher specimens are the only means of corroborating the identity of species for which data are accumulated. In the case of Lepidoptera research, the correct determination of associated food plants is often as important as the identification of the Lepidoptera species itself and this research should require plant vouchers. Voucher specimens have two parts, the animal or plant and the label. The animal or plant specimen's

identification can be checked for accuracy the label cannot. The label is critical! The label data should contain any and all pertinent data to the collection of the specimen with dates and specific location being extremely important. While the primary purpose of voucher specimens is to corroborate published research, voucher specimens also play a secondary role in documenting occurrences determining range limitations or range extensions for individual species. In these cases, as in all others, the deposit of voucher specimens in a dedicated museum or research collection is very important.

## Why Collect Voucher Specimens?

There are a number of reasons for collecting voucher specimens. Among these reasons are the fact that correct identification is not always easy, names mean different things to different people, and the meaning of a name may change over time, so only a voucher can resolve identification questions. Identification is not always easy and comparing with specimens, not pictures or descriptions is preferable. Vouchers also provide credibility and at worse is simply a contribution to science.

Even the best taxonomist sometimes makes mistakes and has either corrected them or had others correct for them. Also remember that when new taxa are described, they are really not "new" but rather ones that have not yet been recognized. Researchers should remember that voucher specimens document their work, explain what they mean by a given name, provide their work with longevity and could actually end up being part of a future study that they never even dreamed of. Voucher specimens are particularly needed if others might use their work or if they want the value of their work to outlast them. Anytime a name is being used, a

voucher specimen is important. Voucher specimens are equally important to all published works whether that work involves collecting or not.

A secondary role of voucher specimens is their use in resolving range limitations of a given species. This comes into consideration when taxa are found near or outside the limit of its previously known distribution. For verification purposes in these cases, as in all others, it is extremely important to place said vouchers in a dedicated museum or research collection. It is also preferable to publish references regarding the existence of these vouchers. Keeping voucher specimens in a private collection is neither useful or warranted. Voucher specimens can also be used, for documentation purposes, as a part of a routine faunal inventory.

Remember that while unvouchered work cannot be either refuted or substantiated that future workers can ignore it, or mention its dubious status.

Holotypes and allotype specimens are vouchers but, in this case, they have a very special role in serving as types for designated taxa.

## Procedures for Preparing and Depositing Voucher Specimens

It is important that voucher specimens be prepared and preserved in accordance with standard practice for the organism involved. Lepidopterists are usually quite capable of preparing arthropods as voucher specimens but are not always knowledgeable or experienced in preparing plants as vouchers. If not, a certain amount of self-education may be necessary before attempting these preparations. Of

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or *P. procilla* Hewitson) and the spectacular monotypic and polychromatic *Batesia hypochlora* C. Felder & R. Felder (Biblidinae), all together, active in this one light gap. This was the only place while exploring the forest, that I saw a *Panacea* species other than *P. prola*.

*B. hypochlora* was also seen a number of times on ridge tops and slopes lower down in the PRA. I recorded the same individual *B. hypochlora* in the light gap on the high ridge, all four times I was there (Nov 28-Dec 8). This individual was very easy to recognize because though its colors were greatly faded, its wings were not tattered at all. In the forest below the high ridge, I saw a few fresh specimens in all their glory. All individuals seen flew from approximately 2-4m above the forest floor and landed and perched on tree trunks, head down with wings spread, in the manner of their relatives *Hamadryas* and *Panacea*. Their flight is slow for nymphalines with measured wing-beats. This flight manner coupled with their colors and aposematic pattern, strongly suggests that they are protected from predation by being poisonous. Late in the afternoon while hiking out from the PRA, I saw an individual *B. hypochlora* resting under a leaf with wings closed at approximately 3m. I surmise this was its resting position for the night.

My last day in the PRA, I saw approximately five individuals (all males) of *Myscelia capenas* Hewitson (Biblidinae), a fairly small nymphaline that is supposedly not that common. Though not *Panacea* or *Batesia*, it certainly is a very attractive butterfly. I had never seen the species before and noting that a few that I saw were somewhat worn, it was a bit curious that I only saw the species my last day in the PRA. Such is exploration of tropical rainforests and their variety of life, continual surprises abound, almost no matter how long you have been in a forest area. My first encounter with *M. capenas*, two very fresh males were

active for at least an hour in a small light gap on the high ridge. They were active mostly between ground level and approximately 2m, alighting on the forest floor leaf litter and on the leaves of small shrubs. They lit for long periods of time, either with their wings spread or slowly opening and closing their wings. I was curious why they stayed in this small local area for such an extended time, as I never discerned any food source present. One of the specimens had a dull reddish band on the dorsal hindwings, the other only the slightest vestiges of this band. Not familiar with this butterfly, I thought I was observing two sexes. *M. capenas* is sexually dimorphic, though the two fresh beauties I saw in that one light gap, represented two forms of the male.

Earlier in the day, a fairly fresh male *Agrias claudina* Godart (Charaxinae) was around and feeding on minerals on my daypack, which I had rested on the forest floor. *A. claudina*, *M. capenas*, *Panacea*, *Batesia hypochlora* - quite a day for nymphalines in magnificent upper Amazonian hill forest!

### **Moths: Concentrated Pericopines and a Veritable Giant**

At Yasuni, I saw far less diurnal moths or nocturnal moths disturbed, than at Tampobata and even some Guyanan lowland forest localities. An exception was a small forest area, perhaps 400 square meters, where scores of pericopine moths (Arctiidae) were concentrated. Almost all were a mimetic species in the genus *Chetone*. This species greatly resembles *Heliconius* species while flying and since all are presumed poisonous, they would all be Mullerian co-mimics. My faded memory recalls one or two other species of suspected pericopines from the same spot; one of them resembling the large clearwing ithomiines of the genera *Thyridia* and *Methona*. The mimetic diurnal tropical rainforest pericopines (and other related arctiids) I have seen, invariably rest under leaves with their forewings folded over their hindwings. In this position they are triangular in shape with their head at the apex, in

the resting position not at all resembling their butterfly co-mimics.

My faded memory recalls most of the moths resting, some at the bases of trees and other places in the lower understory, as well as their customary position under leaves. As I walked through this forest area, what a strange and wonderful sight to see so many large diurnal moths scurrying through the forest understory after being disturbed by my activity! Besides the pericopines, there were a few other arctiid species about in this magical spot. One, a real beauty, landed on my shirt to feed on minerals from my sweat. With a wingspan of approximately two inches, it was jet black with brilliant greenish-blue iridescence at the base of its wings and a vibrant red band on the distal portion of its forewings. A logical question is, why were all of these arctiids, especially the suspected *Chetone* species, concentrated in this one small forest area? It is a question that I am clueless to the answer. At Tambopata, for the period of a week or two, many diurnal moths concentrated along 20m or so of a major trail; a trail that I had used numerous times previously without seeing this phenomenon. Not only great in number, there was good variety among them and I remember most/all being smaller moths than the arctiids at the Yasuni congregation. My guess then and now is that some food source was responsible for the Tambopata congregation and I vaguely recall some discernable odor in that area.

Most of my last day at Yasuni was spent at the two lagunas: colonial *Bactris* palms, great views of trees along the lakes' edges and once again a superb Neotropical bird and butterfly show. I also awaited the return of a family of 5 or 6 Giant Otters (*Pteronura brasiliensis*), which had swam to within approximately 10m of my perch on a protruding lakeside log on a previous visit to the second laguna. Though I had seen Giant Otters a number of times previously in the Peruvian Amazon and Guyana, it is always a thrill to see carnivores in their

natural habitat; especially an exceptionally spectacular one like the Giant Otter. Though I did not see Giant Otters this last day in Amazonia, an avian surprise would bring great joy. In the morning, at my main vantage point, the aforementioned log at the second lake, I heard a woodpecker hammering close by but could not find it. Late in the day, just before I would depart from this same vantage point for the last time on this trip, once again, I heard the same tapping on wood. Up on a lakeside Cecropia, in plain view and illuminated by the descending sun, a Cream-Colored Woodpecker (*Celeus flavus*) revealed its glory. Just like its name implies, the predominant color of this unusual woodpecker is a creamy yellow.

Soon after, with difficulty, I departed this sublime spot. As was customary, to take advantage of every possible moment of daylight in the forest, my rapid walk back to YRS would coincide with the approaching twilight. Walking such, all of a sudden, with a rapid flutter of wings, a great white form sped through the forest understory. I had disturbed a White Witch or Ghost Moth (*Thysania agrippina* - Noctuidae) - the Neotropical giant, which had been resting in the low understory; though difficult to estimate, I believe the wingspan was from 10-12 inches. Ghost-like, resembling a great white bat, it soon disappeared from sight into the descending night.

### **Yasuni Research Station & Tiputini Research Station**

The Tiputini River is a tributary of the Rio Napo, which is one of the major northern tributaries of the upper Amazon River. The YRS is on the south bank of the Tiputini River and is located in Yasuni National Park which includes vast areas of pristine lowland rainforest. The value and sublimity of YRS is the tracts of primeval forest that surround it. YRS is administered by the Department of Biology, Faculty of Exact and Natural Sciences of the Pontificia Universidad Catolica del Ecuador (PUCE). At present, the Director of

YRS is Dr. Friedemann Koester. I talked at length with Dr. Koester both before and after my stay at YRS. I was very impressed with Dr. Koester's great passion for nature/science and his wisdom concerning conservation issues impacting Yasuni National Park and pristine nature in the world at large. If all our conservation leaders would be so enlightened, it certainly would better serve the conservation of pristine nature.

My transportation to and stay at YRS was handled in a flawless manner by Ms. Lucy Baldeon, Academic Assistant for the YRS. While at YRS, the administrative and kitchen staff were always most helpful and very friendly. I paid the tourist rate of \$45 U.S. per night; the researcher rate was \$38 per night. This rate includes simple, comfortable quarters and three good, hearty meals a day, Ecuadorian style. I feel I got great value for my money for my stay at YRS and would recommend a stay there in a heartbeat for anyone interested in experiencing primeval upper Amazonian forest and nature.

The one minor drawback to YRS for a naturalist such as myself, is that the oil company roads that provide ground access to YRS, detract a bit from the pristine nature of the surrounding forest. These roads are also arteries for humans to conduct activities detrimental to pristine nature: illegal logging, hunting,... This being said, I saw six species of monkeys in 17 days and the Common Woolly Monkey (*Lagothrix lagothricha*) was common as its name implies. Let's hope the forest around YRS and other areas of Yasuni NP are minimally impacted by humans in the future.

Downstream from the YRS is the Tiputini Research Station (TRS). Only accessible by river travel on the Tiputini and reached in a few hours by motorboat from YRS, the forest surrounding the TRS is virtually pristine. I had the good fortune to join some botanists on a day trip to TRS from YRS. A certain highlight was an Amazonian boat trip for a few hours

surrounded by primeval forest that even along the Tiputini, was basically unscathed (Fig. 2,3). Besides a splendid Neotropical bird show to be expected along such a pristine river, another highlight was seeing a Boto or Pink River Dolphin (*Inia geoffrensis*) breach the surface of the turbid Tiputini a few times. On arrival at the TRS, right where we disembarked, we were greeted with one of the most spectacular inflorescences I have ever seen (Fig. 4). A huge cauliflorous inflorescence of a small leguminous tree, I was told by a German botanist that this tree was in the same genus as a common understory tree around YRS; this tree bearing smaller clusters of red tubular flowers at the end of branches and though very beautiful, not nearly as spectacular as its marvelous cousin.

For the few hours at the station, the definite highlight for me was a visit to the excellent canopy tower. Constructed around a great Ceiba, Kapok or Silk Cotton Tree (*Ceiba pentandra*, Bombacaceae), the tower platform is 50m above the forest floor. Adjoining the Ceiba is a magnificent fig tree and seen not too far below are a few crowns of the ubiquitous Amazonian large, magnificent *Iriarteia* palm. The tower provides a splendid 360 degree canopy view (Fig. 5-7) of pristine northern upper Amazonas; if I ever return to TRS in the future, I am certain I would spend countless hours in this tower.

Though I did not visit the YRS canopy tower (the reason being that it was close to a road), I was told it was substantially lower than the TRS tower, with nowhere near as spectacular a view. The TRS also has a more extensive trail system than YRS. TRS lacks large oxbow lakes which are present at YRS; these floodplain lakes provide such a spectacular arena to view lepidoptera and wildlife in general. For researchers, the cost at TRS is similar to the cost at YRS. But unlike YRS, the TRS does not welcome tourist visits and the price for tourist (non-researcher) lepidopterists would be exorbitant. For the researcher, TRS would be unexcelled as a place to

access pristine northern upper Amazonas lowland forest.

Our colleague, Steve Graser, allowed me to use some of his superb Yasuni (Oct 2002) lepidoptera photos for this manuscript. As all will plainly see, my manuscript is more an attachment to Steve's awesome photos, rather than the other way around! For more of Steve's excellent lepidoptera/nature photography, please visit his web-site, [www.beautyofnature.net](http://www.beautyofnature.net). The scientific names used for lepidoptera in Steve's photos may differ from what is used on his web-site. These changes reflect the nomenclature found in Lamas et al (2004) and for the reason of simplification, I did not include subspecific names. After reading my manuscript, Neotropical butterfly experts Dr. Keith Willmott and Andrew Neild, both noted that isolated Ecuadorian Amazonas populations of *E. orea* were recently described (2003) by Stephan Attal - *E. orea helios* Attal.

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## Collections Researched

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## Acknowledgements

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# Collectors, collections and collegial connections.

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As lepidopterists and as people, we are connected by a great web of human interactions. These are fascinating to retrace, not only because they lead to unexpected twists and turns. It is also helpful to consider how we are united as lepidopterists in the midst of exciting, challenging times of change. This essay is an adaptation of my 2006 presidential banquet address, in which I reflected on these connections and where they can lead us.

Lepidopterological connections can operate at a variety of levels. They can involve specimens that are collected by one person and used by another. They include field trips that we share, whether as watchers, collectors, or researchers. And they include information and ideas that are passed along, whether through field guides, news articles, formal research papers, or informal conversations about host plants.

These interactions inevitably also include the kinds of friendships that transcend the study and appreciation of Lepidoptera. For example, lepidopterists frequently offer help and sympathy when we know that one of us has a sick family member - as many of you have done for me in the last year. For that matter, bug connections that transcend bugs might even include meeting a lovely lady in an entomology class. In my case, she was interested to see some of the butterflies I was studying. Now, 26 years later, Janet is my wife and the mother of our four children.

But everything has a beginning. I wish I knew more about how other people first got interested in Lepidoptera. I can only offer my own story, on the principle that it is better to talk about

something you know. My case had a precise starting point - early one morning in May 1966, as I was walking to school in Calgary. A Glover's silk moth, *Hyalophora gloveri*, was lying dead on a road. I was entranced the moment I saw it, and I simply had to know more about it. I kept it and, with encouragement from my family, I started to collect moths and butterflies. Those were the days when it was considered normal and healthy for a kid to keep a bug collection.

Part of the attraction was the immediacy of this beautiful moth. I could touch it, feel it in my fingers, brush the powdery scales, and even squish it if I wanted to. I could come back to this dried creature, and the rest of my growing collection, and see something new every time I looked at it. It was also uniquely mine, which is no small matter to a kid at that age. The latent hunter in me was thrilled by the chase for anything new and different. And my organizer side enjoyed arranging specimens in groups where I could see variations on a theme, like elaborations on an exquisite visual melody.

I think these motivations are basically the same as those of a butterfly watcher or photographer. I see little difference between myself, as a collector, and the motivations of a lister who does not want the extra inconvenience and expense of a collection, or a photographer who prefers to not intentionally kill anything for her own enjoyment.

And I want to make it very clear that I have real respect for that stance. However, in spite of some disadvantages, making a collection has one really big advantage. You can

always come back to a specimen and find out progressively more about it.

For example, I collected some pretty arctiid moths in 1971 and 1972, when I was in junior high school. I got some of them to lay eggs and tried unsuccessfully to feed the caterpillars various kinds of plants. I never did find out the name of these moths. But I kept the specimens, properly pinned and labeled, and kept notes. Eventually they were donated to museums when I started moving around the continent as a graduate student.

So you can imagine my absolute delight when, a year or two ago, one of my current PhD students, Chris Schmidt, came to ask me about some specimens that had my name on them as collector, which he had gotten in Ottawa and the Smithsonian. It turns out that they may be a new species of *Grammia*, and only now, more than three decades later, will anyone be able to put a name on them. I was even able to use the collection date on the label to go back to my old notes and find my descriptions of my caterpillar feeding attempts, written in a childish scrawl.

This kind of progressive building of knowledge about Lepidoptera just isn't possible if you don't have collections. Another example popped up just the week before our annual meeting. Bob Robbins emailed me to tell me about some butterflies I collected in Ecuador in 1982, which I eventually donated to the Smithsonian. They were curating some of my pierids and noticed that one of three "*Pereute*" is a female *Catantacta* that is incredibly rare and is almost a dead ringer for sympatric *Pereute*. It is a satisfying feeling to know that these

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specimens are still yielding surprises 24 years later.

Places can provide connections that are just as fundamental as specimens. My favorite is my back yard when I was growing up on a farm near Bragg Creek, west of Calgary, Alberta. I've kept notes, and some specimens, for 40 years and I even wrote a short article on the butterflies of that locality<sup>1</sup>. These observations (and I intentionally call them observations, because most of them are not specimens) have turned out to be more interesting every year that goes by. They will potentially provide documentation of climate change, and have already demonstrated a transition from odd-year to even-year broods in Macoun's Arctic (*Oeneis macounii*).

I didn't realize until years after I moved there that my back yard was only a few miles away from the back yard of Alberta's pioneer lepidopterist, Frederic Hova Wolley-Dod. He died at the end of the First World War, but for 20 years before that Dod collected, traded specimens, published several papers, and corresponded extensively with people around the world. Most of his specimens are in Ottawa now, and when I looked at his swallowtails from the *machaon* group, they showed something very interesting. In my Master's thesis<sup>2</sup>, I used both morphometrics and protein electrophoresis to show that the population from near my family farm (and Dod's ranch site) was a kind of hybrid swarm between *Papilio zelicaon*, *Papilio machaon*, and even some black wing morph genes that had leaked over from *Papilio polyxenes*. More recently, I have shown that the distinct mtDNAs of both *Papilio zelicaon* and *P. machaon* coexist in this population<sup>3</sup>. What Dod's specimens allowed me to say was that the "hybrid" population was quite stable in appearance, looking much the same around 1900 as it does now. Furthermore, Dod's specimens were collected before there was any substantive habitat disturbance in the

area due to agriculture. That means that the formation of this hybrid swarm did not depend on recent habitat alteration of the kind that has been used to discount many cases of leaky genetic boundaries between species.

Dod's collecting provides some other interesting connections. Some of his specimens made their way into the renowned collection of Lord Walter Rothschild, a man whose other connections played an important role in the formation of Israel<sup>4</sup>. A hundred years ago exactly, in 1906, Walter Rothschild and his curator, Karl Jordan, published a revision of the American Papilios<sup>5</sup> in which they remarked on the unusual appearance of some of the black morph specimens from this area, and so they were already aware that something interesting was happening in the *machaon* group west of Calgary. Reading their brief description of this situation gave me a lot of solace as an aspiring systematist.

Another fascinating human connection is that Dod, who was an English expatriate, hired a young assistant, W.H.T. Tams, from London to help him in curating his growing collection. After his return to England, and with no other experience than working in Dod's collection, Tams got a job at the British Museum, where he remained a curator of Lepidoptera until he retired. Tams took some pictures of the Dod ranch house, and he eventually passed those pictures along to Jack Franclemont from Cornell University. Two decades later, Franclemont passed them along to me when I was at Cornell doing my PhD with Paul Feeny, again on swallowtail butterflies. Both the original pictures and new pictures of the Dod farmhouse were eventually published in a book on Alberta Butterflies<sup>6</sup>, with the tiny spruce trees that were in front of the house in 1914 towering over the farmhouse 80 years later in 1994. So it is not just specimens that can be enormously valuable in the great network of lepidopterology.

This brings up a different kind of

connection, which is the lineage of mentors and those who are mentored. This kind of interaction is important for everyone, regardless of whether you are in an academic environment or not. But it is relatively easy to document such connections by considering graduate supervisor relationships. In my case, it turns out that Franclemont is my academic grandfather, because George Ball, my masters supervisor, was Franclemont's first PhD student. So I'm connected by academic lineage to all of Franclemont's other students, like Richard Brown and Don Davis, who are sort of academic uncles (just to name those who were at the 2006 Lep Soc meeting in Gainesville). For that matter, two other former students of George Ball also attended the Gainesville meeting, Don Lafontaine and Jean-Francois Landry, and they are my academic siblings. At the other end, several of my current students or postdocs attended, including Amanda Roe, Chris Schmidt, Thomas Simonsen, Marie Djernaes, and Jason Dombroskie. And I take great pride in that some of my earlier academic progeny were there, including Bernard Landry and Dan Rubinoff, and Bernard even brought his student, Patrick Schmitz, from Switzerland. Other lineages of Lepidopterists that were very much in evidence in Gainesville included Jerry Powell's (John Brown, Dave Wagner, Dan Rubinoff and Paul Goldstein) and Charles Remington's (Lincoln Brower, Bob Pyle, Tom Emmel and Deane Bowers). No wonder Lep Soc meetings feel so much like a family reunion.

That leads to another kind of connection, which is the one between close colleagues and coauthors. For example, Jerry Powell was enormously inspirational and helpful to me for the five years that I was at the University of California at Berkeley, where he was the de facto co-supervisor of my Lepidoptera students and postdocs. Jerry is also a coauthor with me on several papers, and it would be very interesting to trace the connections of shared coauthorship to anyone else in

the Lepidopterists' Society. Another example is Larry Gall, with whom I published my first real research paper. I sometimes wonder how many degrees of separation there are (whether by coauthoring or mentoring) between me and, say, Charles Darwin or Carl Linnaeus.

If you consider connections through letters and direct correspondence (excluding bulk mail), I would guess that every lepidopterist on the planet is connected by at most six degrees of separation. It is even more fascinating to trace old connections and see them evolve. For example, in 1981 I wrote to Gary Anweiler in Saskatchewan to follow up on a host record for *Papilio machaon hudsonianus*, and he ended up sending me a photographic slide of a larva on an enigmatic leaf that I have still not been able to identify with certainty. I never actually met Gary in person until I returned to Alberta in 1999. He made a special point of welcoming me home, and it turned out that my timing was impeccable. In the fall of 1999, Gary, along with several other people like Dave Lawrie and John Acorn and myself became the founding members of the Alberta Lepidopterists' Guild. Gary was president of the group and I was vice president.

As an aside, I want to point out that some of us in the Alberta Lep Guild first knew each other through TIEG (Teen International Entomological Group), which Robert Dirig and Ted Pike were active in during the late 1960's and early 70's. I first met Dave Lawrie in 1983, when he was 13 and attended the first Lepidopterists' Society meeting in Alberta, which was held in Fairview in the Peace River Region and organized by Ted Pike. Dave had to get his mother to drive him to the meeting because he wasn't old enough to get a license. And now he is our incoming new Lep Soc secretary. Obviously some Society members continued to encourage him, and I know that one of them is Ernest Williams.

Before I move on from the theme of connections through correspondence, I

would be remiss if I didn't mention that I corresponded briefly in 1983 with a doctor in Colorado who requested my records on *Hesperia* skippers. I sent him some records, as I'm sure many other people did as well, but I only found out much later what became of him. It turns out that this doctor was very successful in medical business, and our meeting in Gainesville took place in a center that he has endowed. Bill McGuire has had his own very large impact on the web of lepidopterology and I was delighted that he gave a talk right after mine. I can't help but wonder what would have happened, though, if McGuire's growing interest in Lepidoptera had met with only hostile reactions from other butterfly enthusiasts. Would we be enjoying a McGuire Center today? I doubt it. And yet I find it incomprehensible that some email chat groups occasionally indulge in paroxysms of belligerence toward naïve new members. Then the old participants wonder why there don't seem to be as many young new lepidopterists as there used to be.

Finally, there are other kinds of fundamentally important connections among us, and these relate to the continuity of major ideas that started with the accumulation of innumerable records and painstakingly detailed work on Lepidoptera. Many of these ideas have eventually developed a much larger impact beyond the study of Lepidoptera.

For example, island biogeography was already articulated in a surprisingly mature form by Eugene Munroe in the 1940s based on Caribbean butterfly diversity<sup>7</sup>. Munroe was a charter member of our Lepidopterists' Society, and is now an honorary member. Although his systematics work was acclaimed, his biogeographic work languished for decades because, amazingly enough, it was just not considered very interesting by evolutionary biologists during the 1950's. However in the 1960's the same ideas, apparently independently discovered, were brought forward to great acclaim. This time a memorable

phrase, island biogeography, was coined to describe the concept. More importantly, the time was right for people to see the breadth of application of the idea. Nonetheless the idea was first developed by a lepidopterist, based on Lepidoptera and the thousands of distributional records that contribute to any faunal survey.

The concept of coevolution also owes its genesis to lepidopterists, and here the connection is more obvious. Paul Ehrlich, a long term member of the Lepidopterists' Society, and botanist Peter Raven articulated the idea<sup>8</sup> at the same time that they came up with a simple catchy term that resonated with the scientific community. Many people, including May Berenbaum as a prominent example, continued to refine these ideas using Lepidoptera, while other scientists took the same ideas well outside the Lepidoptera. As with island biogeography, the first clear exposition of the idea was made possible by the huge background of data on hostplant associations that is available for butterflies, as well as a strong evolutionary classification framework produced by, in part, Eugene Munroe.

More recently, DNA barcoding has followed a similar trajectory. This research agenda is now seen as an exciting new idea that burst suddenly on the scene, assisted by tireless advocacy and a catchy new term. Barcoding is very well funded and is now being applied well beyond the Lepidoptera, but it really started with work on Lepidoptera as its foundation. Hebert et al's original paper in 2003<sup>9</sup> relied on moths collected in one backyard. Furthermore, the very idea of broad standardization of gene regions that are sequenced for systematic work, including most prominently the COI gene of mitochondrial DNA, was proposed by three Lepidoptera researchers<sup>10</sup>. The concept of DNA barcoding also relied heavily on a variety of work published in the 1990's that demonstrated the virtues of mtDNA as a marker for

*Continued on pp. 50*

Collectors...continued from pp. 49

species boundaries, especially in Lepidoptera and other groups with similar sex determination systems<sup>11</sup>.

It is clear that a lot of influential ideas started with studies on Lepidoptera, and their early development depended crucially on the kinds of meticulous knowledge and case studies that so many of you are engaged in as lepidopterists, in one way or another.

But timing is everything, and it is obvious that the world is changing rapidly. Many of the things that we took for granted a few decades ago are not so simple now – like the ease of collecting, a profusion of pristine habitats, or general social understanding of the value of collecting. On the other hand, some things that were close to impossible just a few years ago are taken for granted now – such as sending images around the planet and getting someone to identify it in minutes – or using DNA to identify species just as easily as people have historically used genitalia dissections.

I think it is essential that we embrace change – go with the flow – live in connection with our times – learn to thrive, to flourish, in our larger social and physical environment.

At the same time we should remember that specimens are forever. Just make sure they are properly labeled. Photos and other records can last forever too. Just make sure they are in a digital format that is going to be preserved. Even ideas can go on forever, especially if there is a simple catchy term to refer to them, and such ideas can evolve in fascinating ways that take on a life of their own.

I am reminded of the ending of Vladimir Nabokov's poem "On Discovering a Butterfly":

*Dark pictures, thrones, the stones that  
pilgrims kiss,  
poems that take a thousand years to die  
but ape the immortality of this  
red label on a little butterfly.*

Running through all this are the interactions and friendships that make

the appreciation and study of Lepidoptera such a rich and multifaceted endeavor. It gives us something truly worthy to devote the ever-ticking days of our lives to. What wonderful days they are for those of us fortunate enough to spend them among butterflies and moths.

That brings me to a recent encounter that made me really think about what I was doing as a lepidopterist. I ran into a classmate from grade school, and of course we took the opportunity to catch up on each other's lives. I was marveling at her adventures and the time she spent traveling around the world, working in the far north or living back to the land for several years. But when I told her that I was quite envious of what she had done, she stopped me in mid sentence and said with complete sincerity that, on the contrary, she was the one who envied me. She felt that she had just spent her life flitting from one disconnected thing to another. On the other hand, I had always had butterflies in my life. I pursued them as a kid in school, as a student in college, as a profession, as an avocation, sometimes as an obsession, and always as a strong thread of continuity through my life. I had to admit she was right - butterflies can do that for you.

I have a sense of enormous optimism, of hopefulness, for the appreciation and study of Lepidoptera in the decades to come. We are very fortunate to live in such interesting times – and I am intentionally using the phrase "interesting times" in the way that some people invoke the proverbial Chinese curse. Interesting times are not just times of change and stress, but of opportunity. We can work with those changes and opportunities, at the same time that we come to a better understanding of the things that are most fundamental and durable – the specimens and records that we document, and the ideas and human interactions that tie them all together.

But we must embrace new people who show an interest in Lepidoptera, even

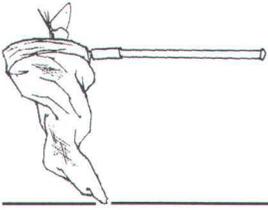
if they come to that interest from another angle from the one we followed. If we can make them feel truly welcome here, as for example Ray Stanford and Larry Gall made me feel welcome at my first Lepidopterists' Society meeting in Boulder in 1977, then I'm sure that we will end up learning more from them than they will from us.

That is what our Lepidopterists' Society is all about – a sense of inclusiveness, of family and of continuity. It doesn't matter whether we are collectors or conservationists, students or professionals, we are all connected in so many ways by the love of Lepidoptera.

May our society flourish in the years to come.

**Footnotes:**

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# Mailbag...

Dear Editor:

I would like to dispute two major claims made by Arthur Shapiro in his provocative article, "A Victorian 'Take' on the Morality of Collecting" (*News*, Spring 2006, p.13)."

First, Shapiro asserts that "perhaps the first 'Field Guide' ever published (1860)" was W. S. Coleman's *BRITISH BUTTERFLIES. I know of at least two guides, however, which appeared much earlier -- Moses Harris' ENGLISH LEPIDOPTERA OR THE AURELIAN'S POCKET COMPANION (1775), which I have not read; and Johann Meigen's HANDBUCH FÜR SCMETTERLINGSLIEBHABER, BESONDERS FÜR ANFÄNGER IM SAMMELN (Guide for Butterfly Lovers, especially for Beginning Collectors, 1827). A tiny book one could carry in a pocket, the Meigen guide, which I have read, was a wonderful introduction to European butterflies. It contained many black and white pictures, explained butterflies through all their stages, offered tips on collecting, and warned against the depredations of parasites. It was the best in a long line of similar books on nature—on birds, trees, flowers, animals, as well as lepidoptera—already published in Germany from the late eighteenth century onward.*

My second reservation has to do with Shapiro's claim that "it was nearly a universal tenet" of Victorians that human beings had an unfettered right to use animals as they wished and that animals—especially insects—did not feel pain. Surely, most people did accept these ideas, but the ideas were not by any stretch "universally" held. At least from 1800, the Romantics challenged

these notions, extolling all life as valuable (no life was higher or lower than any other); later, liberal sentimentalists of all kinds—but notably members of the SPCA and the anti-vivisection society of London—added their voices to this dissent. Many argued that all animals felt pain and had natural "rights" similar to those held by human beings. By the 1850s attacks were especially heated, which may explain why so many entomologists came to the defense of collecting.

Perhaps the most influential of these apologists was J. O. Westwood, whose *BUTTERFLIES OF GREAT BRITAIN (1854)* ridiculed the "moralists" and "poets" who villified collecting as cruel. Insects, he insisted, had such diffuse nervous systems that they could not register pain. "Cruelty," therefore, "is not an objection to be made to the practical study of Entomology." But even entomologists at the time disagreed with Westwood and the others. Among the most famous of these was Augustus Radcliffe Grote, the greatest American authority on American moths in the world, who confessed in his *NEW CHECKLIST OF NORTH AMERICAN MOTHS (1882)* that he had "abandoned collecting" moths and butterflies because he hated killing them. "These insects," he said, "were part of a Universe of Stars and Suns. I could not understand the life I was taking; and then I felt the grief that arises when we become conscious of the role played by Destruction....I hope that the enthusiasm of the student will not cause him to forget that these little creatures suffer and feel pain."

*William Leach  
Professor of History  
225 West Shore Drive,  
Carmel, New York 10512-3857*

Dear Editor:

David L. Wagner's "Another View on Recreational Collecting" (see *News* 48(1)) is the most well thought out and rational view concerning the lepidoptera collecting debate, that I have read or heard. If a person's moral/ethical compass precludes them from collecting, that is a personal decision and to be respected. But unless a lepidoptera population is adversely effected by collecting or the collecting is done for solely selfish motives (no higher purpose for either the collector or final recipient), this personal moral/ethical decision should never equate to a collective dictate. With the incredible destruction wrought upon the natural world by the very existence of our species, trying to deny people the aesthetic, intellectual and spiritual joy from the contemplation of beautiful insects in a collection, equates to a highly irrational perspective, whether promulgated by individuals, societies, bureaucracies, governments... I hope our Society has the collective wisdom to embrace Dr. Wagner's views concerning 'recreational' collecting; views that besides showing good judgement, are also pragmatic, especially concerning the present state of our natural world and the much weightier problems that beset it.

*Steve Fratello  
11 First Street  
W. Islip, NY 11795*

Send all letters or emails for the Mailbag to: Dale Clark 1732 S. Hampton Road, Glenn Heights, TX 75154 USA email: [daleclark@dallasbutterflies.com](mailto:daleclark@dallasbutterflies.com)



# The Marketplace

**IMPORTANT NOTICE TO ADVERTISERS: If the number following your advertisement is "474" then you must renew your advertisement before the next issue! Remember that all revisions are required in writing.**

## Books/Videos

For Sale: Hewitson's 5 Volume "Exotic Butterflies." Good condition, but somewhat foxed. Will be available for examination at the annual meeting in Gainesville. Contact me previously at [Reisele@aol.com](mailto:Reisele@aol.com) or Robert C. Eisele, 10620 SW 27th Avenue, J-9, Ocala, FL 34476. 481

The Worlds Butterflies on Film. Ongoing series of top quality films available in VHS (PAL or NTSC) at US \$12 each + freight. 100's of species vividly illustrated in Peru, Malaysia, Ghana, Kenya, Philippines, South Texas, Europe. Kenya also available on DVD. Many happy US Customers already. Quick delivery from UK. Contact John Banks at [johnbanks@cinebutterflies.com](mailto:johnbanks@cinebutterflies.com) - or see full details on website - [Cinebutterflies.com](http://Cinebutterflies.com) or mail to John

Banks, 28 Patshull Road, London NW5 2JY, UK 481

New Issues of Papilio (New Series): #12, Taxonomic studies and new taxa of North American butterflies. James Scott, Michael Fisher, Norbert Kondla, Steve Kohler, Crispin Guppy, Stephen Spomer, and B. Chris Schmidt, 74 p. + 6 color pl., \$14.00; #13, *Phyciodes (Phyciodes)*: more progress, J. Scott, 38 p., \$7.00; #14, Butterfly hostplant records 1992-2005, with a treatise on the evolution of *Erynnis*, and a note on new terminology for mate-locating behavior, J. Scott, 74 p., \$10.00; #15, Building the California Academy Drawer, J. Scott, 40 p., \$6.00; #16, Portable (six drawer) cabinets for California Academy Drawers, J. Scott, 10 p., \$1.50; #17, Proposals for a new INSECT STUDY, COMMERCE, AND CONSERVATION LAW that deregulates dead insects, and proposals for fixing the Endangered Species Act as applied to insects, J. Scott, 17 p., \$3.50. #12-17 \$38, #1-17 \$69, postpaid in U.S. (add \$2 abroad,

foreign orders please send International Postal Money Order in dollars), James Scott, 60 Estes St., Lakewood, Colorado 80226-1254 482

## Livestock

Eggs/Cocoons of northeastern North American Saturniidae, available at various times. *Actias luna*, *Automeris io*, *Antheraea polyphemus*, *Callosamia angulifera*, *Callosamia promethea*, *Citheronia regalis*, *Hyalophora cecropia*, *Hyalophora columbia*, *Samia cynthia* and various butterflies and Sphingidae. Bill Oehlke, Box 476, Mointague, PEI, C0A 1R0, Canada, (902) 835-3455, [oehlkew@islandtelecom.com](mailto:oehlkew@islandtelecom.com) 481

For Sale: Cocoons of *Hyalophora cecropia* and *Callosamia promethea*. Larvae were reared at a low population density on Wild Cherry. Email or SASE for prices. Ed Komperda 111 Crestmont Road Greene, NY 13778 [BigEdK7@aol.com](mailto:BigEdK7@aol.com) 482

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

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

Only members in good standing may place ads. **All advertisements are accepted, in writing, for two (2) issues unless a single issue is specifically requested.**

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

All ads contain a code in the lower right corner (eg. 386, 391) which denote the volume and number of the *News* in which the ad. first appeared. **Renew it Now!**

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 Society, given adequate indication of dishonest activity.

Buyers, sellers, and traders are advised to contact your state department of agriculture and/or PPAAPHIS, 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.

### Specimens

For Exchange: Ornithoptera, Troides, Papilio, Parnassius, Charaxes, Prepona, Hepialidae. I need Australian rare beetles. yoshiaki FURUMI 97-71 komizo, Iwatsuki-Shi, Saitama-Ken, 339-0003 JAPAN. <sup>482</sup>

Wanted: I am looking for spread (very good to perfect) specimens of Queen Alexandra's Birdwing (Ornithoptera alexandrae) - pair, and Hercules Moth (Coscinocera hercules) - pair. They will be used in educational rainforest lepidoptera presentations that are presently enjoyed by over 5,000 school children annually. Steve Fratello 11 First St., W. Islip, NY 11795 USA (631) 321-1509. <sup>482</sup>

For Sale or Trade: Saturnids, Spingids, several butterfly spp., and Coleoptera native to Central New York State. Email or SASE for list. Want to trade for Saturnids, Parnassians, Papilio and Coleoptera not native to northeastern United States. Ed Komperda 111 Crestmont Road, Greene, NY 13778 **BigEdK7@aol.com** <sup>482</sup>

Offered for sale or exchange: Charaxes, Papilionidae and many more African lepidoptera. Numerous aberrations, sexual mosaics and gyandromorphs also available. List and pictures on request. Wanted: South America *Prepona*. Giancarlo Veronese, viale Venezia 138,33100 Udine (Italia). **gc.veronese@virgilio.it**, Fax: ++39/0432-23 2654. <sup>481</sup>

### Equipment

Light Traps, 12 volt DC or 110 volt AC with 18 inch length (15 & 25 Watt) and 24 inch length (20 & 40 Watt). All with 365 Quantum black light bulbs. Rigid vane assembly of stainless steel, aluminum or plexiglass. The traps are portable and easy to use. Rain drains and beetle screens to protect specimens from damage. For info contact; Leroy C. Koehn, 522 Stillwater Drive, Winterville, NC 28590-9704; Tel: 252-321-8645; **Lepttraps@aol.com** <sup>481</sup>

Bait Traps, 15" Diameter, 36" tall collapsible traps with cloth top and

plastic coated nylon screen and supported with 3/16 steel rings. A plywood platform is suspended with eye bolts and S-hooks. The bait container is held in place by a retainer. Three types are available: Flat Bottom, Invert funnel and Tropical. For info contact; Leroy C. Koehn, 522 Stillwater Drive, Winterville, NC 28590-9704; Tel: 252-321-8645; **Lepttraps@aol.com** <sup>481</sup>

Flourescent Collecting Lights: UV Night Collecting Light. Units are designed with the ballast enclosed in a weather tight cast aluminum enclosure and the flourescent bulbs in a clear shatter proof tube Leroy C. Koehn, 522 Stillwater Drive, Winterville, NC 28590-9704; Tel: 252-321-8645; **Lepttraps@aol.com** <sup>481</sup>

Mercury Vapor Collecting Lights: 160 Watt & 250 Watt MV Self Ballast bulbs with medium base mounts. Light weight and idea for trips out of the country. Leroy C. Koehn, 522 Stillwater Drive, Winterville, NC 28590-9704; Tel: 252-321-8645; **Lepttraps@aol.com** <sup>481</sup>

### Miscellaneous

World's Largest Saturniidae Site: a private online membership depicting over 1300 species of worldwide Saturniidae. State by state, country by country checklists, flight times, rearing data, etc.. One time life membership fee of \$40.00 U.S. Details at: **http://www.silkmoths.bizland.com/indexos.htm** <sup>481</sup>

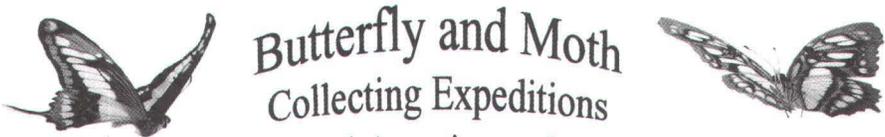
### Announcement

#### LEPIDOPTERA SECTION EDITOR NEEDED FOR ZOOTAXA

Zootaxa, a rapid international journal for animal taxonomists, is in need of a section editor for Lepidoptera focused on non-butterfly contributions. Zootaxa publishes high quality zootaxonomic papers regardless of their length. All manuscripts are peer-reviewed before acceptance, and accepted papers are published as soon as they are ready, without delay. Printed and online editions are published on the same day, and both are available to subscribers. There is no page charge for publishing with Zootaxa. Open access of papers will be arranged if authors can pay a fee (\$20/page). Color illustrations are published free of charge in the online edition. ISBNs are assigned to monographs (papers of 60 or more pages). Zootaxa is indexed in Science Citation Index Expanded and Current Contents/Agriculture, Biology & Environmental Sciences by Thompson ISI (USA), and in Zoological Record by Thompson Biosis (UK).

If you would like to put your editorial skills to good use, check out the Zootaxa website - <http://www.mapress.com/zootaxa/>

or contact John Brown at **jbrown@sel.barc.usda.gov**.



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# ARE THE MARPESINAE (NYMPHALIDAE) UNPALATABLE?

Peter Smetaèk & Rajani Smetaèk

The Retreat, Jones Estate, Bhimtal, Nainital UA 263 136, India [petersmetacek@rediffmail.com](mailto:petersmetacek@rediffmail.com)

## ABSTRACT

Sixteen specimens of the Himalayan butterfly *Cyrestis thyodamas* Kollar were presented on 55 occasions to wild, free ranging birds. Two were eaten and the remainder ignored or rejected, indicating that the species is distasteful to birds. The possibility of distastefulness being a subfamily level trait is examined.

## INTRODUCTION

The Marpesinae is a small subfamily of Nymphalidae that occurs throughout the tropical and subtropical parts of the world except Australia (Varshney 1994). Three genera are included, the American and African *Marpesia* Hübner (Watson & Whalley 1983) and the Asian *Cyrestis* Boisduval and *Chersonesia* Distant.

One species, *Cyrestis thyodamas* Kollar, occurs in the Himalaya west of Nepal. Specimens of this species were offered along with other freshly collected, wild butterflies to foraging wild birds to ascertain their palatability.

Birds are quick eaters and swallow even large butterflies within seconds. A few pecks in the course of a couple of seconds are often enough for them to taste something unfamiliar, like a new butterfly species, and decide what to eat. If a bird pecks and manipulates a dead butterfly for more than 5 seconds but then rejects it, it usually means that it wants to eat it but cannot. If this behaviour is recorded frequently for an insect species, one may assume that the insect is at least distasteful, if not actually poisonous.

## METHOD

Between 1999 and 2002, we offered >560 freshly collected, wild butterflies

belonging to 86 species to wild, free ranging, foraging parties of birds in 265 encounters at Jones Estate (1500 m elevation; latitude 29 degrees 20' 41" N and longitude 79 degrees 36' 15" E) in Nainital district, Uttaranchal state, India, in the outermost foothills of the Himalaya. One or more specimens of *Cyrestis thyodamas* formed part of the presentation on 55 occasions. A total of 16 specimens (15 males and 1 female) were presented. These specimens were presented along with a total of 261 specimens of other butterflies, all of which had been collected in the recent past. All the specimens were presented whole.

If not eaten, the butterflies were repeatedly presented until they were too dry to be of interest to the birds. The birds sometimes ate many butterflies and sometimes ignored all of them. Of the 261 other specimens offered, 86 were eaten, especially the Nymphalinae (Nymphalidae) and Theclinae (Lycaeidae)

The birds consisted of one family party of White Crested Laughing Thrushes (*Garrulax leucolophus*) whose composition varied from 2 to 7 birds during the course of the experiment and White Throated Laughing Thrushes (*Garrulax albogularis*) in groups of 4 to >60 birds seasonally. A Blue Whistling Thrush (*Myiophonus caeruleus*) ate a part of a *C. thyodamas* specimen, although this bird species very rarely investigated the presentation.

The birds were observed from a distance of 3 – 4 m, initially through a wire mesh screen and later, as familiarity grew, in the open.

## RESULTS

Of the 16 *C. thyodamas* specimens presented, two entire specimens were

eaten by different birds and the head of a third specimen was eaten. *C. thyodamas* specimens were pecked, manipulated and rejected on ten occasions by different birds. On the remaining occasions, the *C. thyodamas* specimens were ignored or flung aside along with other distasteful species.

On one occasion, it was not possible to tell whether the abdomen of a *C. thyodamas* had been eaten or lost after it had been pecked, manipulated and rejected by two birds in quick succession. On another occasion, the head of a specimen was missing after it had been pecked and rejected by three birds in quick succession and it was not possible to tell whether the head was eaten or had been pecked off and lost.

On the occasion when the head of a *C. thyodamas* was observed to have been eaten by a Blue Whistling Thrush, the bird first pecked off and ate the head of a *Pieris brassicae* L. and then a *C. thyodamas* head. It shook its head violently in an uncharacteristic manner upon eating the latter and thereafter desisted from eating any more of the butterfly.

On another occasion, an adult White Crested Laughing Thrush thrust a *C. thyodamas* into a juvenile's gape but the latter immediately spat it out. Another bird later took the same butterfly to a tree on a lower terrace some distance away where the wings were pecked off and the body perhaps eaten or else lost.

During the same session, a fourth bird took a second *C. thyodamas* specimen to a lower terrace where a juvenile approached it, so that it thrust the specimen into the juvenile's bill. The juvenile put it down, gave it a few pecks and gave up, afterwards wiping its beak on a twig with every appearance of

disgust. Such behaviour was usually observed after a known distasteful species, such as a Danaine or a Delias Hübner (Pieridae) had been pecked.

The partly eaten specimens are in our collection.

On the two occasions when a *C. thyodamas* was eaten whole, the bird concerned left immediately afterwards, so it was not possible to observe distress behaviour or regurgitation, if any.

On other occasions, the *C. thyodamas* specimens were treated exactly as known unpalatable species were treated by the birds, i.e. they were either ignored or flung aside to see what was underneath.

## DISCUSSION

Members of the Marpesinae are not known to be distasteful. As a matter of fact, they were believed to be palatable and the communal roosting by *Marpesia berania* Hewitson in Costa Rica has been cited as an exception to the rule that communal roosting and the habits associated with it are accompanied by unpalatability (Turner 1975).

In addition, unlike most known unpalatable species, *Cyrestis thyodamas* is a rapid flier, is quick to evade attack and, when alarmed, hides with the wings pressed flat against the underside of a leaf. This habit is reported for some other Marpesinae, too, such as *Chersonesia risa* Doubleday and *C. rahria* Moore (Wynter-Blyth 1957) and

*Marpesia camillus* Fabricius (Watson & Whalley 1983), and is most unusual for an apparently distasteful species.

*C. thyodamas* also qualifies for being called false-headed according to traditional criteria enumerated by Robbins (1980). These are (1) the anal angle of the hindwing is everted at right angles to the wing; (2) the hindwing tails are crossed and white tipped; (3) the wings bear conspicuous lines converging towards the anal angle of the hindwing. In fact, many Marpesines bear some or all of these characters. Specimens of *C. thyodamas* are occasionally taken with the "false head" missing, perhaps after it was targeted by a predator. As with the inconsistencies mentioned in the last paragraph, the need for a 'false head', presumably to deflect attacks by predators, is rather unusual for a distasteful species.

*C. thyodamas* larvae feed on species of wild fig (*Ficus glomerata* Roxb., *F. nemoralis* Wallich and *F. indica* L. (Wynter-Blyth 1957) as does the unpalatable Danaine *Euploea core* Cramer and the presumably palatable Thecline *Iraota timoleon* Stoll (Sevastopulo 1973).

From the above, it is evident that *C. thyodamas* bears no character or habit that is normally associated with distastefulness. The only fact indicating this distastefulness is its rejection by birds of the species mentioned in the introduction.

## CONCLUSION

From our observations, we can unequivocally state that *Cyrestis thyodamas* is quite distasteful to birds at the study site. Whether this distastefulness is unique to the species or is a subfamily level character can only be ascertained in parts of the world where there are more representatives of the subfamily. The communal roosting of *M. berania* suggests that other members of the subfamily may also be distasteful.

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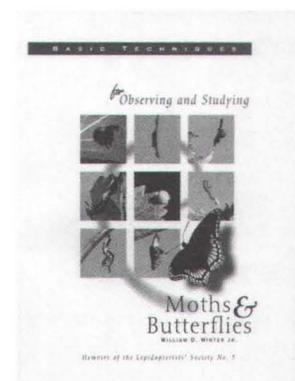
## Announcement...

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# More on *Melitaea ismeria* Boisduval & Le Conte: the discovery of Boisduval's specimens of *Chlosyne nycteis* (Doubleday)

John V. Calhoun

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I have always been fascinated by mysterious taxa and none are more enigmatic than *Melitaea ismeria*, described and illustrated by Boisduval & Le Conte (1835). Despite my research *ad nauseam* on this topic, *M. ismeria* still intrigues me. My investigation of this taxon evolved into a very complex detective story for which evidence continues to reveal itself (Calhoun 2003, 2004, 2005). Despite an I.C.Z.N. application to suppress *M. ismeria* (Calhoun et al. 2005), its true identity remains historically relevant.

I concluded in Calhoun (2003) that *M. ismeria* is synonymous with *Chlosyne gorgone* (Hübner), not *Chlosyne nycteis* (Doubleday) as proposed by Gatrell (1993). A "type" of *M. ismeria* was apparently selected in 1913 from among specimens that came from the collection of Jean B. A. D. de Boisduval, but it has been missing since 1925 (Calhoun 2004). Twenty-four years after describing *M. ismeria*, Boisduval (1869) compared it with *C. nycteis*, which he listed from California. Boisduval did not imply that these taxa were conspecific. Although *C. nycteis* is not known to occur in California, I suggested that Boisduval doubtless possessed specimens of this species and they likely originated from eastern North America (Calhoun 2004). The existence of these specimens would be crucial in evaluating Boisduval's concept of *M. ismeria*, as well as his allusion to *C. nycteis* in California.

During a recent visit to the National Museum of Natural History (USNM), I discovered two female specimens of *C. nycteis* that were once owned by

Boisduval (Figs. 1, 2). Both possess multiple labels, including those that read "EX-MUSAE/O/Dris. Boisduval." They also bear the labels "Oberthür Collection" and "Barnes Collection." Boisduval bequeathed his collection in 1876 to Charles Oberthür, whose own collection was sold in 1924. William Barnes obtained many North American specimens from this sale and his collection was acquired in 1930 by the NMNH (Calhoun 2004). It has generally been assumed that Barnes purchased only Boisduval "type" specimens, but my analysis of the NMNH collection indicates that additional material was included.

Both specimens of *C. nycteis* from Boisduval's collection are correctly identified, but the largest determination labels are not in his hand (Figs. 1, 2). The label on the first specimen (Fig. 1) was presumably prepared by a curator of Boisduval's collection, possibly Louis M. A. Depuiset. The abbreviation "Amer. Sept." refers to Amérique Septentrionale (northern [north] America). This label is made of thick board paper and probably served as a drawer label that was pinned near these specimens in Boisduval's collection. This would explain the lack of a similar label on the second specimen (Fig. 2). It was probably placed on the specimen by Oberthür. This label includes a reference to the illustration of this species on Plate 23, fig. 3 in Doubleday (1847). The large determination label on the second specimen (Fig. 2) was written by Oberthür and likewise includes a reference to the figures in Doubleday (1847). It was supposedly

created by Oberthür to extend Boisduval's identification to the second specimen.

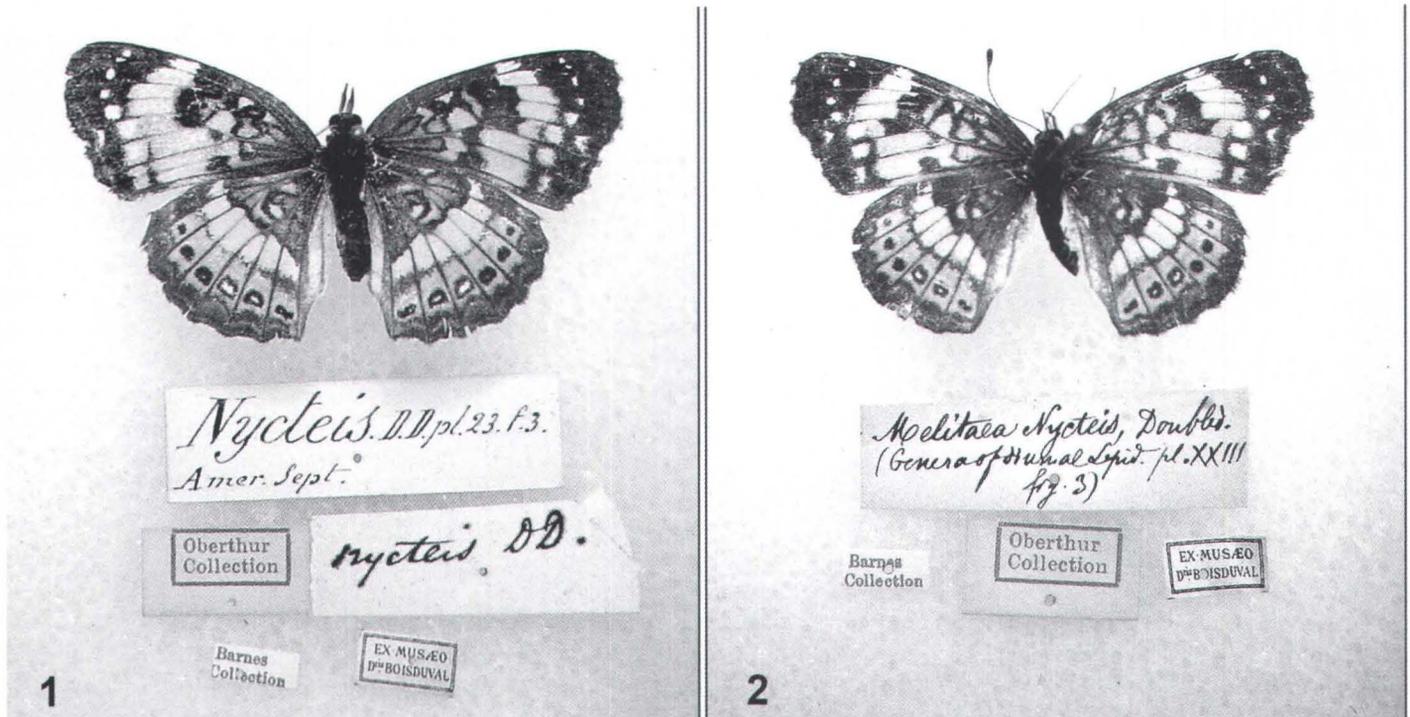
Most critical is the presence of another determination label on the first specimen that reads "*nycteis* D.D. [Doubleday]" in Boisduval's hand (Fig. 1). The writing is consistent with Boisduval letters preserved at the American Philosophical Society Library and is analogous to other labels on Boisduval specimens in the NMNH and Natural History Museum, London. This label may have been the original drawer label used by Boisduval prior to its replacement by the more elaborate version. As suspected, both specimens represent nominotypical *C. nycteis* from eastern North America. They were likely in Boisduval's possession when he compared *C. nycteis* to *M. ismeria*, but he mistakenly attributed them to California.

The presence of Boisduval's own determination label confirms his familiarity with *C. nycteis*. More importantly, it establishes that his concept of *M. ismeria* did not apply to this species. If he considered these taxa to be synonymous, Boisduval would surely have identified these specimens as *M. ismeria*, which he described twelve years before Doubleday proposed *Melitaea nycteis*.

## Acknowledgements

Thanks are extended to the staff of the NMNH for allowing access to the collections and being so helpful during my visit to the NMNH. Robert K. Robbins allowed me to reproduce my photographs of the specimens. Valerie-Anne Lutz provided access to the

Continued on pp. 59



Figs. 1, 2. *Chlosyne nycteis* from the collection of Boisduval. 1, female specimen with determination label in Boisduval's hand. 2, female specimen with Oberthür's determination label



### Aberrant male Eastern Tiger Swallowtail (*Papilio glaucus*)

An aberrant male of *Papilio g. glaucus* was taken in Irving (Dallas County), Texas, in April of 2006 by Russell Rahn. The unusually large amount of orange scaling in the submarginal regions of both the upper and lower secondaries give an almost brownish cast to the regions otherwise scaled with black only. This specimen bears a great resemblance to the ones illustrated by Rick Rozycki in the NEWS (46(3):97) for 2004. Thanks to Susan and Anders Tyreman for taking and printing the digital photographs used here.

If you have photos of aberrant specimens (or live shots) that you would like to share with members please send them to the editor, Dale Clark, at [daleclark@dallasbutterflies.com](mailto:daleclark@dallasbutterflies.com)

***Voucher..continued from pp. 43***

course full and correct documentation of the plant or animal specimens is essential as is the maintenance of this data with the specimens. Before sending a voucher specimen to any museum or institution for deposit, it is imperative to check and to assure that they are prepared and receptive to such a specimen. Many potential depositories are simply not equipped to handle them and others may have special requirements for them. It is best to check in advance. Many collections now require special labels on voucher specimens and/or may keep them separate from their reference collections. Prior consultation with the selected institution will assure that you are both on the same accord, that you have prepared and documented your voucher properly and that they are prepared to accept, house and curate it and will make it available to others for future studies. It is also important to state, in any published work, where you obtained your voucher specimens as well as where you deposited them, and also to make sure that you do deposit them.

**Misuse of Voucher Specimens**

Within the Society are some very divergent opinions regarding the acceptability and non-acceptability of collecting. This particular writing does not intend to go into this controversial area at all. I have noticed, however, a marked trend, in recent years, for collectors to justify their collecting activities by stating that they are "collecting vouchers". In many cases this is nothing but hypocrisy and far from the truth. Any collector that collects and then maintains the specimens in his/her personal collection is not collecting vouchers no matter what he/she calls them. I have even overheard statements like: "I need to voucher that (species) for my collection", or "I want to visit the type locality in order to get a voucher there". These statements are nonsense of course, but I do understand why they

are made. It is simply expediency and a way of explaining their activities to others that might otherwise disapprove altogether. When some say, "I vouchered a specimen", what they really mean is that they caught it and put it in their personal collection. In the long term, however, misuse of the term "voucher" is not beneficial because it undermines the real reason and purpose of voucher collecting.

**Other Considerations for Voucher Specimens**

In most cases, where field identification problems should not commonly arise, a single insect is all that is required for voucher purposes and, when possible, this should be a male and the entire animal. However, with many species one specimen may not be reliable for subsequent identification. In these cases a short series, including both sexes, may be mandated. Often the complexity of identification may not be known and judgments must be made in this regard. Multiple voucher specimens are also useful when they may demonstrate a range of variation in characters useful to later studies, or they may even show that more than one species was combined in the original identified series. In collecting vouchers, as in collecting any other specimens, care must be taken to insure that they are legally collected and that any necessary permits were obtained.

**Publication Policies Regarding Voucher Specimens**

Many journals do not require, or even recommend, deposition of vouchers as a condition of publication. However, this is changing and quite a few do now require such an activity.

In our own JOURNAL (Journal of the Lepidopterists' Society) it is stated, in the "Notice to Contributors" that "When appropriate, manuscripts must name a public repository where specimens documenting the identity of organisms can be found. Kinds of reports that require vouchering include

descriptions of new taxa, life histories, host associations, immature morphology, and some experimental studies." There is no such statement or requirement for the NEWS (News of the Lepidopterists' Society). The statement in the JOURNAL seems, to me, to be rather weak and uncertain. In spite of using strong words (must and require), it also uses ambivalent words (when appropriate and some). When involving descriptions of new taxa, this requirement seems to be very well followed, but otherwise it has been ignored as often than not. This is especially true when it comes to herbarium vouchers that I have never seen indicated in a JOURNAL article. JOURNAL editors, and particularly reviewers of JOURNAL articles, should check and insure that compliance with the author's instructions is being met. Perhaps the instructions themselves should be improved, clarified and strengthened. Perhaps requirements for voucher specimens in conjunction with publication in the NEWS should also be considered.

Vouchering species reports in the SEASON'S SUMMARY is a gray area to be sure. I do know that some zone coordinators will not accept sight records routinely, especially for difficult to determine species or for records of a species out of its expected range. However, is a collected record any better if it is not a voucher and deposited in a suitable collection?



M. ismeria..continued from page 56

J. E. Le Conte correspondence in the American Philosophical Society Library, Philadelphia. David Wright, who accompanied me to the NMNH, witnessed my excitement over this discovery while bent over countless specimens of *Celastrina*.



# From the Editor's Desk

Dale Clark

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## The Past and the Future...

Among the many kind letters and emails I received after my first issue as editor there were two from past editors of the NEWS -- Phil Schappert and June Preston. Each was insightful and supportive, talking about their own long stints in the editor's chair. What really struck me about these two pieces of correspondence was that it clearly demonstrated how far the NEWS had come during their tenures.

Phil's pointed out various technical aspects which should be watched for and how to correct them in the program that I use to pull the NEWS together. June told me how in her terms as editor the NEWS was put together on a typewriter! And as if to underscore these differences, these two communications came to me in vastly different forms: an email and a good old fashioned letter (remember those?).

These differences aren't really that surprising. After all, the Lepidopterists' Society has been around for a long time and changes and advances are only natural, both in the Society itself and in the form the publications take.

*The Lepidopterists' News*, as it was called when it made its debut back in May, 1947, was twelve pages long, with no photographs, and welcomed people to membership in the Lepidopterists' Society. It consisted of Articles of Organization; a book review of *Butterflies* by E. B. Ford; a listing of recent papers published on lepidoptera; a brief biography on William Henry Edwards; an article on the importance of life history studies, by Charles Remington; notes on various people's collecting trips; and notices where

members could sell and exchange specimens.

These are all topics which can be found in the NEWS today, almost six decades later. I rather like that consistency.

Will the NEWS be changing? It's certainly likely that it will at some point in the future. I have a few ideas in mind. How that change is brought about and what form it will take will depend on a variety of matters, not the least of which is input from members.

What would *you* like to see change about the NEWS? What types of articles and news items would you prefer to read? Perhaps just as important, what types of things do you *not* want to see in the pages of our newsletter?

As I pointed out last issue, this is your society and you do have a voice in it. You can contribute to it. Some of you may be thinking: "*But I'm not a writer. What do I know?*" You don't have to write an article that's thousands of words in length, like this issue's Yasuni Research Station article. Nor do you have to know how to dissect the genitalia of the *Phyllodonta* (I certainly don't!). But one thing you can contribute is your opinion.

Some things won't change. The NEWS will remain a place where contributions can be made by professional and amateur alike. It will be a place where members have a voice. Hopefully, it will only get better with age.

Let me hear from you.

Dale Clark

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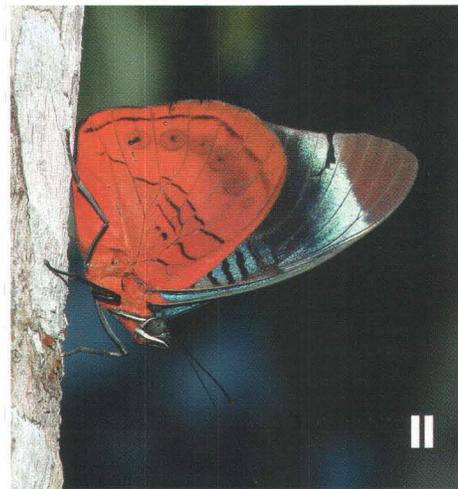
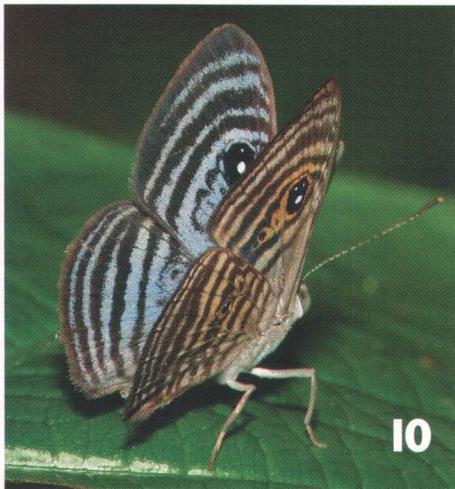
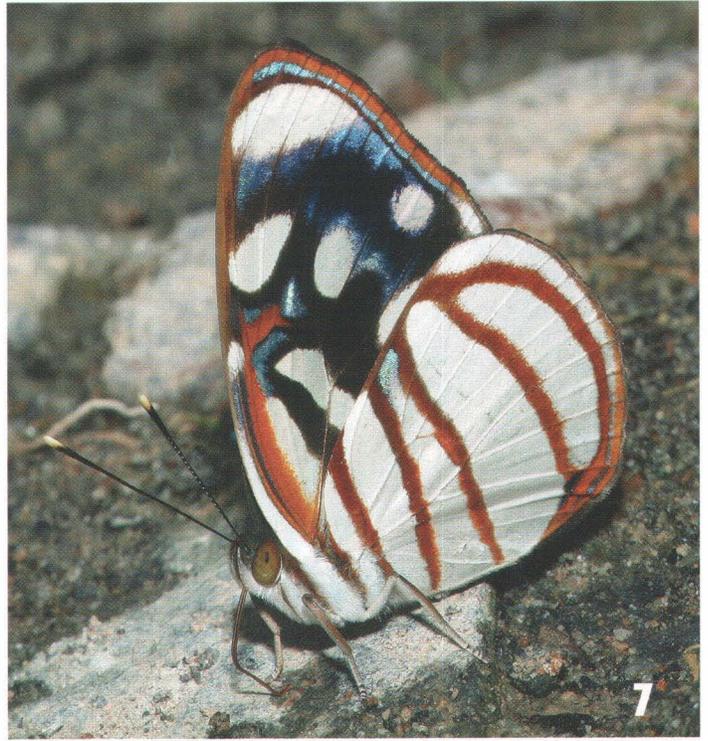
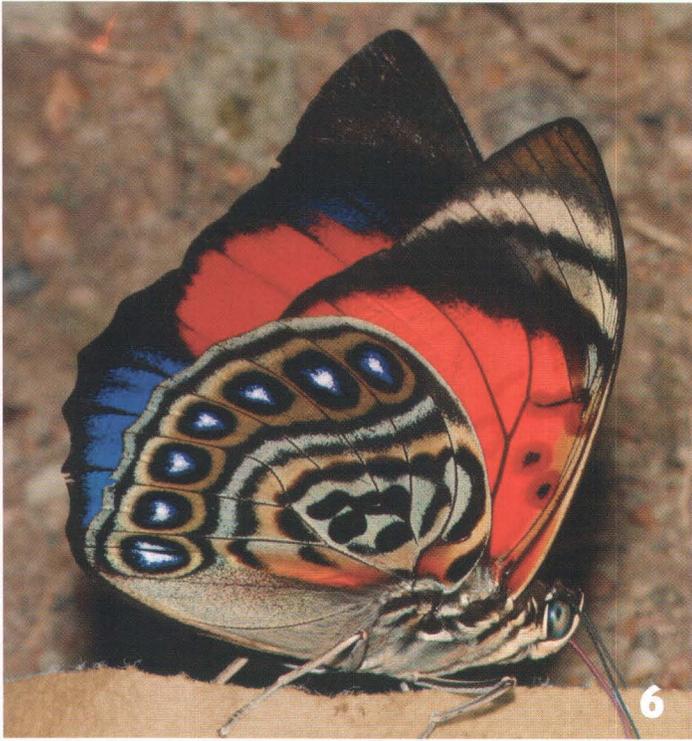
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### Butterflies of Ecuador

1) *Haetera piera* (Satyrinae) male; 2) *Dynamine artemisia* (Nymphalidae: Biblidinae) male, see pp. 64 for dorsal surface; 3) *Porphyrogenes passalus* (Hesperidae: Pyrginae), male; 4) *Oleria sexmaculata* (Ithomiinae); 5) *Mysarbia sejanus* (Hesperidae: Pyrrhopyginae), male; 6) *Agrias claudina* (Nymphalidae: Charaxinae), male; 7) *Dynamine chryseis* (Nymphalidae: Biblidinae) male, see pp. 37 for dorsal view; 8) *Philaethria dido* (Heliconiinae); 9) *Marpesia petreus* (Nymphalidae: Biblidinae); 10) *Mesosemia jucunda* (Riodinidae) female; 11) *Panacea procilla* (Nymphalidae: Biblidinae); 12) *Perrhybris pamela* (Pieridae: Pierinae) male. All photos by Steve Graser.





## 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:

Kelly Richers,  
Assistant Treasurer,  
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Student	20.00
Sustaining	60.00
Contributor	100.00
Institutional Subscription	60.00
Air Mail Postage for <b>News</b>	15.00

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

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Contact Julian Donahue for information on mailing list rental.

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Requests for missed or defective issues should be directed to: Ron Leuschner (1900 John Street, Manhattan Beach, CA 90266-2608, (310) 545-9415, [ronleusch@aol.com](mailto:ronleusch@aol.com)). Please be certain that you've really missed an issue by waiting for a subsequent issue to arrive.

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## Submission Guidelines for the News

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

1. Electronically transmitted file and graphics—in some acceptable format—*via* e-mail.
2. Article (and graphics) on diskette, CD or Zip disk in any of the popular formats/platforms. Indicate what format(s) your disk/article/graphics are in, and call or email if in doubt. Include printed hardcopies of both articles and graphics, a copy of the article file in ASCII or RTF (just in case), and alternate graphics formats. Media will be returned on request.

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

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

## Submission Deadlines

Material for Volume 48 must reach the Editor by the following dates:

Issue	Date Due
3 Autumn	Right now!
4 Winter	Oct. 27, 2006

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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Warren (2007); Richard A.  
Anderson, John V. Calhoun,  
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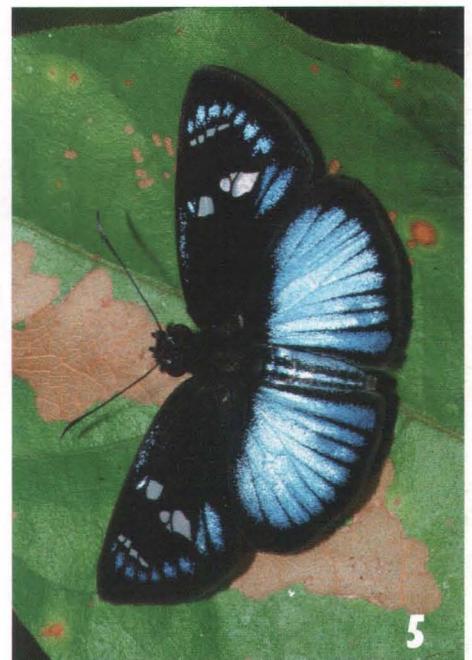
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**More butterflies of Ecuador...**

1) *Asterope hewitsoni* (Nymphalidae: Biblidinae) probing a leaf; 2) *Posttaygetis penelea* (Satyrinae), very common in alluvial forest; 3) *Euselasia orfita* (Riodinidae) male; 4) *Dynamine artemisia* (Nymphalidae: Biblidinae) male; 5) *Pythonides jovianus* (Hesperidae: Pyrginae). All photos by Steve Graser. Many more of Steve's stunning photographs can be found at [www.beautyofnature.net](http://www.beautyofnature.net)