Volume 45, Number 2 Summer 2003

NEWS OF THE LEPIDOPTERISTS' SOCIETY

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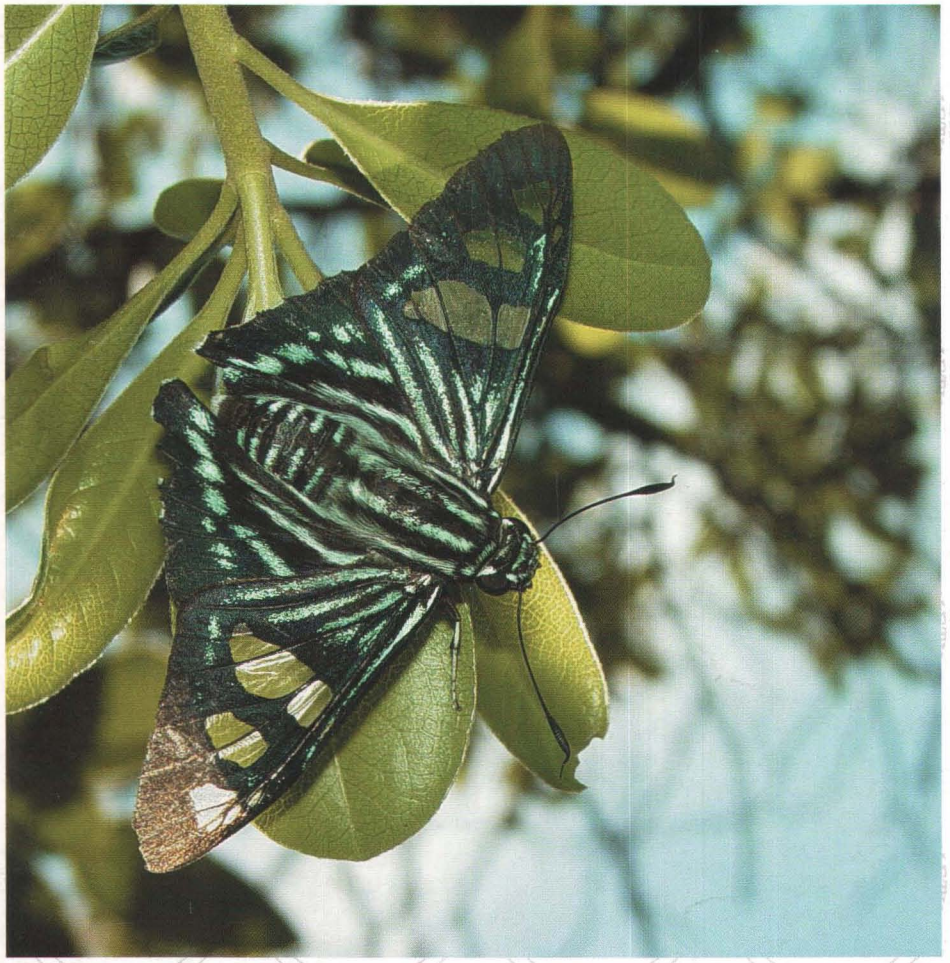

*"As I walked down the sidewalk toward the trees, I was almost struck in the face by a weakly flying, black and blue butterfly, which seemed to be the size of a Guava Skipper (*Phocides polybius lilea*), but not nearly so dark. It flew directly away from me, down into the vegetation beneath the olives. I motioned to David to go to the car and get the camera. Combing through the vegetation in the direction the bug went, I located what appeared to be a Rainbow Skipper (*Phocides urania*), perched under a leaf. I laid flat on my back on the sidewalk and took several shots straight up, to get the upper surface of the butterfly. It then flew away and disappeared. That evening, we found that the photos turned out remarkably clear and after posting on the internet, we found that this was not a Rainbow Skipper, but a Beautiful Beamer (*Phocides belus*), which was a new US record."*

David J. Hanson

Inside:

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The **News of the Lepidopterists' Society** (ISSN 0091-1348) is published quarterly by The Lepidopterists' Society, c/o Los Angeles County Museum of Natural History, 900 Exposition Blvd., Los Angeles, CA 90007-4057, USA., and includes one or two supplements each year. The **Season Summary** is published every year as Supplement S1 and is mailed with issue 1 of the News. In even numbered years a complete **Membership Directory** is published as Supplement S2 and is mailed with issue 4 of that volume of the News. Please see the inside back cover for instructions regarding subscriptions, submissions to, and deadline dates for, the News.

Application to mail at Periodicals Postage rates is pending at Los Angeles, CA and at additional mailing office (Lawrence, KS).

POSTMASTER: Please send address changes to **News of the Lepidopterists' Society**, c/o Los Angeles County Museum of Natural History, 900 Exposition Blvd., Los Angeles, CA 90007-4057.

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Issue Date: July 15, 2003 ISSN 0091-1348

Cover: New to the USA: *Phocides belus* (Hesperiidae), the Beautiful Beamer, photographed April 13, 2003 at Bentsen-Rio Grande State Park, Hidalgo Co., TX, by David J. Hanson. See the article on pp. 42.

Fall Migration of Queens, *Danaus gilippus strigosus* Bates, in Mexico and Texas

Gerald E. Einem

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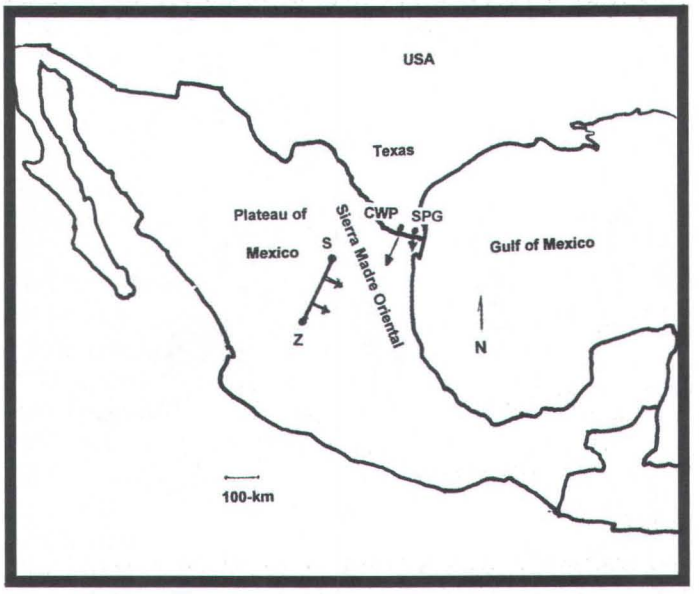
Butterfly migration (see Scoble 1992 for a review) is the directed, often predictable, one-way flight of a large population of butterflies or a similar migration that includes a return flight (at least partial) of the same butterflies as in the Monarch (*Danaus plexippus* L.). Although the spectacular migration of *D. plexippus* is well known (Urquhart 1960, 1965, 1966, 1976; Calvert & Brower 1986; Calvert 2001), there is a lack of information about the often equally impressive migration of its sympatric cogener, the Queen butterfly, *Danaus gilippus* (Cramer). The breadth and duration of its migration, the exact flight direction, destination and return flights, if any, are little known.

Field guides or books about North American butterflies vary significantly in details and the amount of coverage of *D. gilippus* concerning migration. For example Holland (1949) and Opler (1992 and 1999) do not mention that this species migrates while Pyle (1981) mentions only temporary immigrations to the north. Klots (1951) and Milne & Milne (1980) say simply that the Queen butterfly is not migratory. In contrast, Opler (1984) reports that in the tropics where there is a distinct dry season *D. gilippus* is an altitudinal migrant, flying from low to high elevations to wait out unfavorable times of the year. Also, Scott (1986) notes that *D. gilippus* migrate north in the spring and south from August or September to October in Florida and that a few large migrations are known. Moreover, Glassberg (1999) reports that tremendous numbers of Queens migrate southward in south Texas and northern México in the fall.

A review of the biology of milkweed butterflies by Ackery & Vane-Wright (1984) makes no reference to migration by *D. gilippus* but mentions that a number of other danaines, in addition to the Monarch, form overwintering clusters. Here I provide new information about the fall migration of *D. gilippus strigosus* (Bates), sometimes called the "striated queen", in the Lower Rio Grande Valley of Texas and the northern plateau of México. The Mexican migration was a spectacle notable for its great breadth and density of butterflies.



General direction of migration of* D. g. strigosus *in Mexico and Texas. *Site 1 (Route 54 in México from Saltillo (Coahuila) going ca. SSW to Zacatecas (Zacatecas)): S = Saltillo, Z = Zacatecas. Site 2 (The Nature Conservancy of Texas, Chihuahua Woods Preserve near Mission, Hidalgo Co., Texas) and Site 3 (The National Audubon Society, Sabal Palm Audubon Sanctuary near Brownsville, Cameron Co., Texas): CWP = Chichuachua Woods Preserve, SPG = Sabal Palm (Grove) Audubon Sanctuary.*

The direction of Queen butterfly migration at each site (see below) was determined by comparison of butterfly flight path to the direction of a highway they were crossing. A compass was used to check highway directions and the flight paths of butterflies and detailed maps of each region were used to corroborate the highway direction for each site.

Observations

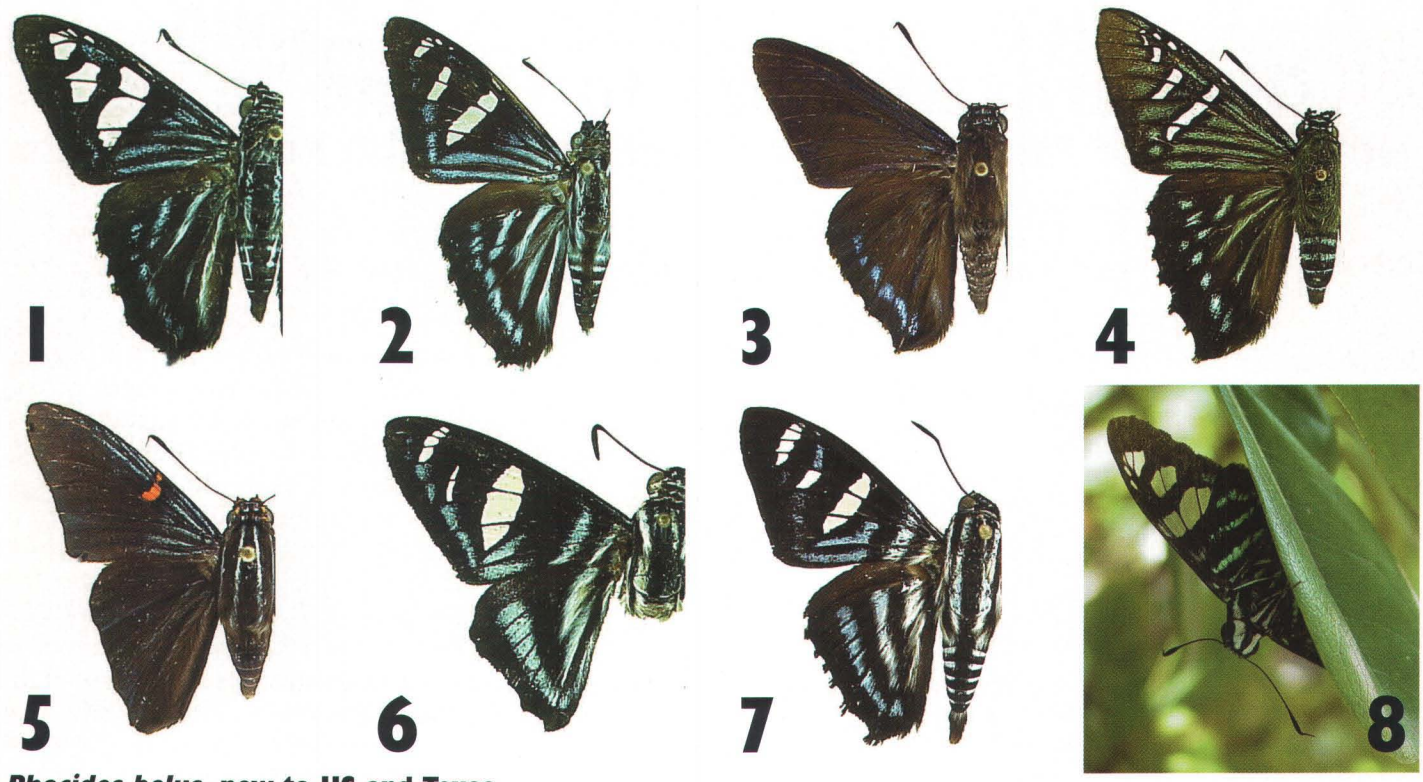
Site 1 (México: Coahuila and Zacatecas).

On October 30, 2001, from 11:00 to 14:55h CST, while driving my automobile ca. SSW on Route 54 in northern México, I drove a segment of the highway where Queen butterflies (*D. g. strigosus*) were rarely out of sight as they crossed the highway in front of my vehicle. The Queens were observed migrating in large numbers along a broad front for a distance of over 336 km between Saltillo and Zacatecas (straight-line distance; highway distance was 380 km.) Since my journey of October 30 began in the morning at Saltillo and ended at Zacatecas, where I spent the night, it is possible that the breadth of this migration was even greater.

continued on pp. 47

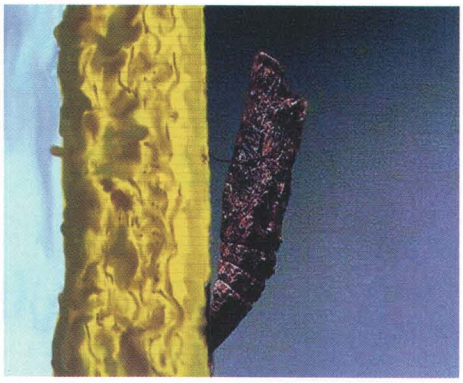
The "striated queen," *Danaus gilippus strigosus*, upperside (left) and underside (right). Photos taken at Stengl "Lost Pines" Biology Station near Smithville, Bastrop Co., Texas by Phil Schappert. See Gerald Einem's article about migration in this species beginning on the previous page.

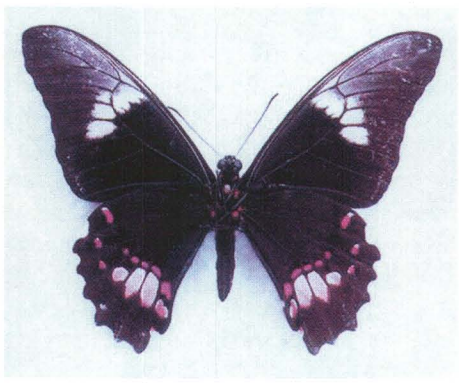
An adult Giant Skipper, *Megathumus yuccae*, photographed at Vero Beach, Florida, 24 March 1976, by Dr. George O. Krizek. See Harry Pavulaan's *Tails & Tales* article on pp. 48 of this issue for the whole sordid story...



***Phocides belus*, new to US and Texas.**

1. *Phocides belus*; **2.** *Phocides pigmalion pigmalion*; **3.** *Phocides pigmalion okeechobee*; **4.** *Phocides urania*; **5.** *Phocides polybius lilea*; **6.** *Jemadia hospita*; **7.** *Elbella polyzona*. Photos 1-7 by Ed Knduson; **8.** *Phocides belus*, Bensten-Rio Grande State Park, Hidalgo Co., TX, April 13, 2003. Photo by David J. Hanson. See the article on the next page.





Life History of *Priamides anchisiades* in Costa Rica

Upper Left: Cluster of first instar larvae of *P. anchisiades*, Dec. 17, 2001. **Upper Right:** Final instar (also showing a parasitized larva). **Far Left:** Pupa a few days before eclosion. **Left:** Ventral view of female. Photos by Miguel E. Chumpitasi, see article on pp. 46.

Phocides belus Godman & Salvin (Hesperiidae), New to US and Texas

with a Review of *Phocides* & similar species of the USA & Northern Mexico

David J. Hanson, Ed Knudson & Charles Bordelon

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David Hanson's narrative:

"My best friend David Brantley, a lifelong birder and biologist, who lives in northern Wisconsin, was visiting the Rio Grande Valley for 2 weeks and accompanied me to Bentsen-Rio Grande State Park on the afternoon of April 13, 2003.

After sighting a nesting pair of a rare bird, the Northern Beardless Tyrannulet, we visited the butterfly garden and later the park headquarters, where there are a pair of Wild Olive trees (*Cordia boissieri*). This is a location that regularly produces great finds and today would be no exception. As I walked down the sidewalk toward the trees, I was almost struck in the face by a weakly flying, black and blue butterfly, which seemed to be the size of a Guava Skipper (*Phocides polybius lilea*), but not nearly so dark. It flew directly away from me, down into the vegetation beneath the olives. I motioned to David to go to the car and get the camera.

Combing through the vegetation in the direction the bug went, I located what appeared to be a Rainbow Skipper (*Phocides urania*), perched under a leaf. As I approached, it flew weakly; but with rapid wingbeats, to another leaf about 4 feet from the first. There it stayed long enough for me to get a quick photo of it peering out from beneath the leaf. Once again it flew, this time to within a few feet of the sidewalk and disappeared beneath another leaf. I laid flat on my back on the sidewalk and took several shots straight up, to get the upper surface of the butterfly. It then flew away and disappeared. We also sighted a Guava Skipper and a Coyote Cloudywing at the olive trees that afternoon.

That evening, we found that the photos turned out remarkably clear and after posting on the internet, we found that this was not a Rainbow Skipper, but a Beautiful Beamer (*Phocides belus*), which was a new US record. The photos show moderate wear on the wings, making me think that it may have flown from Mexico on the brisk south wind, which we had been having at the time.

The following day, the same Beautiful Beamer made appearances at 1:30 PM, 2:35 PM, and 3:50 PM. Each time it flew in the same manner from blossom to blossom on the olive trees, staying only a few minutes and then departing into the woods just across the road. Many people were able to see and photograph it that day. David Dauphin, of Mission, TX, was able to get video footage during one of the Beamer's appearances. Although I, and others looked for it on subsequent days, no further sightings were noted."

Phocides belus was formerly considered to be a subspecies of the highly polymorphic species, *P. pigmalion* (Cramer), (Evans, 1952), but more recently has been treated as a separate species. It occurs in Mexico from Tamaulipas, south to Central America (De la Maza Ramirez, 1987). Nominate *P. pigmalion* occurs from Veracruz, Mexico, south into Central America. *Phocides belus* differs from *P. pigmalion* chiefly in the greater width of the hyaline spot-bands on the outer forewing. The Mangrove Skipper, *P. pigmalion okeechobee* (Worthington), which occurs in southern Florida, is known to utilize Red Mangrove, *Rhizophora mangle (Rhizoporaceae)*, as a larval host (Minno & Emmel 1993), but the host of the other subspecies is apparently unknown. The only published larval host for *P. belus* (in El Salvador) is Malabar, or Tropical Almond, *Terminalia catappa (Combretaceae)* (Steinhauser, 1975). Curiously, this is one of the known hosts for *Anastrus sempiternus*, another recent US record from south Texas. This tree is native to Indonesia, but is widely introduced in the neotropics for its edible fruit, and oil. It is sometimes used as an ornamental in extreme south Texas. The live specimen shown here was not collected, but the comparative photos are clear enough to remove all doubt as to the determination. This determination has been independently confirmed by Andrew Warren (pers. comm.). *Phocides belus* has been christened with the common name "Beautiful Beamer" by NABA.

Phocides urania (Westwood) has also been reported from Texas and in fact, a Texas specimen was described by Scudder , 1872, as *Erycides texana*, this now synonymized under *urania*. The Texas locality was apparently Brownsville, but we do not know the exact data and locality of the type. No other authentic records of *P. urania* are known from the US, but there are other unverified reports from AZ and TX. It occurs near the border in Tamaulipas and Neuvo Leon, Mexico. The larval

host of *P. urania* is not reported. *Phocides urania* differs from the above species in that the iridescent bands on the wings are green, rather than blue and it also lacks the longitudinal bands on the dorsum of the thorax. *Phocides urania* has several common names, including Rainbow Skipper (Scott) and Jade Beamer (NABA).

Phocides polybius lilea Reakirt is a resident species in extreme south Texas, where it apparently uses Guava (*Psidium guajava, Myrtaceae*) as a larval host (Kendall & McGuire, 1975). Guavas are not native to Texas, but are widely planted in the Rio Grande Valley for fruit and ornament. It is abundantly distinct from the above species and well illustrated in most field guides. It is commonly called the Guava Skipper.

There are several other Mexican skippers that resemble *P. belus*, or more closely, *P. pigmalion*, these mostly being in the subfamily *Pyrrhopyginae* (*Elbella spp.* and *Jemadia spp.*). These differ in the lack of the antennal apiculus, and usually have oblique blue bands near the base of the forewing. Two examples shown (see pp. 41) are *Jemadia hospita* (Butler) and *Elbella polyzona* (Latreille). The former occurs in southern Mexico to South America; the latter is South American, but a superficially indistinguishable species, *Elbella patrobas* (Hewitson), occurs north to Veracruz, Mexico. Many authors have remarked on the unusual similarity between these species, which in some cases, require that genitalia be examined in order to positively determine the species, or genus. Nothing is known about whether any of them are chemically protected from predators, but there are several diurnal moths, that could serve as mimetic models, such as *Hypocrita bicolora* (Sulzer) (*Arctiidae, Pericopinae*), that are so protected and occur in the same habitats. For large, powerful skippers, many observers have remarked that the adults seem "docile" or "tame" when nectaring.

Presently, *P. belus* is considered a stray to Texas and would likely not have been noticed, if it had not found its way to a place frequented by Lepidopterists. If breeding populations exist, they should be found in the vicinity of the host (Malabar Almond) or perhaps, Guava, and would most likely be in residential areas or nurseries.

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A New Breeding Population of *Xanthopastis timais* (Cramer) [Noctuidae, Hadeninae] in Southern Illinois.

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On June 22nd, 2002, while staying at Dixon Springs State Park in Pope County, Illinois, I discovered a female *Xanthopastis timais* resting on a grass stem in front of a mercury vapor light. The initial specimen was a female, and after taking it to my cabin to retrieve my collecting bag, I subsequently collected seven more moths, 4 males and 3 females for a ratio of 1:1 between 9:00 PM and 2:31 AM. All of the specimens were freshly emerged, within 24 hours, and the females were gravid.

The moths were collected in a glen that was sparsely populated with cottonwood and maple trees below the cabins. Further to the east, to the north, and to the south, this was replaced by thick woodland dotted with open grassland. There was a stream flowing through the glen and this emptied into a larger creek, which was situated above a dam. In the meadow around the dam, and in the glen I noticed annuals which appeared to be related to Lily's. I suspect that this was the plant that the moths may have been feeding on. Covell (p. 110) cites one hostplant as being Spiderlily.

I conclude that there may be a breeding population at Dixon Springs State Park. Upon rare occasion, the moth, which is mostly tropical in its distribution is reported as straying to the north of its range. Both Forbes (p. 106) and Covell (p. 110) give a range from "Staten Island, N.Y. and N.J. to Fla., west to Ky., Ark., and Tex. April-July in Miss.; Nov-May and Sept. in Fla., where it may be common. Rare elsewhere; a stray northward."

I thank Dr. John Bouseman of the Illinois Natural History Survey in Urbana, Illinois for holding his annual entomological excursion at Dixon Springs State Park, and thus setting up the opportunity for making this discovery, of which, he, *et al*, had taken part.

Literature cited:

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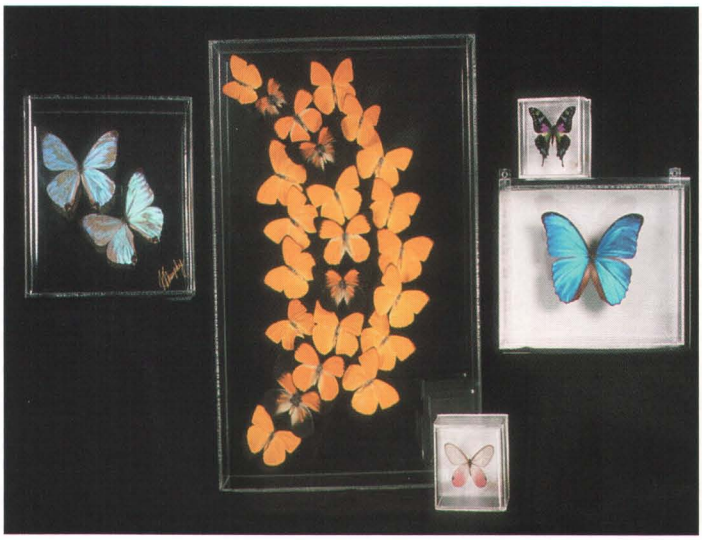

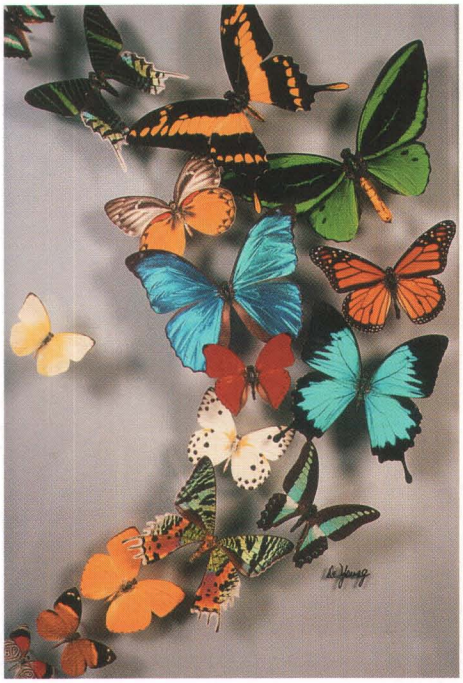

Butterfly Graveyards? I Think Not!

Gary Noel Ross

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Like most aficionados of our scaly-winged insects, I relish shopping for butterfly-related merchandise. Ranging from books and curios to pricey *objet d'art*, I usually indulge myself—often more than I should, but rationalized under the pretense that I am helping the local economy and perhaps even a "starving artiste." Over the years I have on more than one occasion encountered retailers in chic boutiques marketing artwork crafted from preserved butterflies or wings of butterflies. Many creations feature whole butterflies spread in sealed Plexiglas boxes or solid blocks of plastic. Some even mount the butterflies in realistic poses along with bits of plant material and seal them within glass domes. While the most expensive mounts demonstrate high quality craftsmanship—even brandishing the autograph of the artist—others are poorly executed, incorporating specimens lacking entire heads and abdomens.

There are other types of displays—more picturelike. For example, a common

genre from Taiwan, the Philippines, and western Africa features landscapes, animals or even people—all composed entirely of fragments of butterfly-wings glued to fine parchment and then wrapped within cellophane. Still another is a kind of shadowbox featuring a painted background accented with a preserved butterfly or two. Often the butterfly species are not indigenous to the landscape, and the frames are poorly sealed so that in time mold and insect pests will most likely destroy the specimens. But then, I suppose, one should not expect craftsmen to consider biogeography and long-term preservation above aesthetics and economics.

Now, to idolaters of beauty like myself such artwork is infatuating—even considering the frequent scientific transgressions. However, I am very much unnerved with the usual explanation offered by the salesperson as to the origin of the butterflies. Commonly, the commentary goes something like this:

> "Specimens are old-age butterflies that simply fell from the sky into butterfly graveyards."

Pressed further, the proprietor details:

> "The carcasses are collected by local folks and then brokered to artists and craftsmen via middlemen."

Some prestigious museum shops even post signage indicating that the butterflies used in the artwork are "real farm raised on cruelty free tropical farms around the world." The wordage usually includes "the average life span of a butterfly is 7-10 days" intimating that following their ephemeral flights, the corpses are quickly gathered for crafting. The message usually concludes by suggesting that the purchase of the merchandise assists indigenous people earn a living.

I imagine, to the typical tourist these explanations seem reasonable—although perhaps a bit supercilious. And in today's conservation-charged society, the descriptions are politically correct. But truth they just ain't! The explanations are nothing more than subterfuge and a clever bit of retail bamboozling.

As an experienced lepidopterist, I can categorically state that I have *never* witnessed a butterfly fall dead from the sky. (However, I have observed the detached wings of a butterfly drift down through the air as the result of the insect's disastrous encounter with (ostensibly) a bird or monkey). And "graveyards?" Maybe for African elephants, but not for contemporary butterflies.

Probably the closest thing there is to a stockpile of dead butterflies would be the ground caches of carcasses of several species of butterflies that have communal night or winter roosts. For example, the monarch, heliconians, and several Asian danaids generate refuse piles when individuals die during their periods of inactivity. However, usually, these carcasses are quickly dispatched or mutilated by marauding predators. Furthermore, these roosting species are usually not the taxa showcased by artisans.

First of all, butterflies are *adult* insects, that is, the final stage in a metamorphic life cycle. Ergo, butterflies have but a singular purpose: to jumpstart another generation. Some lepidopterans like the ponderous silk moths don't even feed during their nanosecond existence. Rank and file butterflies diet on sugar solutions contained in flower nectars or fermenting plant fluids contained in fruits and saps. Sperm and egg production require more substantial nutrients, however, these are commonly furnished by nutrient reserves sequestered during larval stages or else moist soils during "puddling" behavior. Not surprisingly, butterflies do not have the wherewithal to repair damaged parts.

Bottom line? Lepidopterans with their oversized, delicate wings wear quickly. No Methusalehs here! As the insects become physically and physiologically challenged, they easily succumb to pathogenic microbes including fungi, bacteria, and viruses. Predation by vertebrate and invertebrate predators is more patent, too. Even environmental factors such as high or low temperatures, severe winds and rains, and vehicular traffic can exact considerable toll on a weakened insect. At this point they fall victim to Darwinian "survival of the fittest."

For example, I live in Baton Rouge, Louisiana, a Gulf coast venue dominated by a sub-tropical climate. As a rule, "Ole Jack Frost" doesn't appear until late November or even December. Therefore, the flight period for many butterfly species is relatively long. But after night temperatures dip below freezing, I often scour my butterfly garden the next day for dead butterflies. Alas, to no avail. However, following a brief cold snap I have observed a butterfly or two perched in a sunny spot attempting to warm before taking flight. Frequently, the insect would soon become air borne. But occasionally the butterfly would be unable to achieve a critical temperature. Then, after dropping to the ground, an anole or fire ants would seize the hapless insect. Anoles typically devour small insects intact whereas ants dismember their booty before carting the parts away for a subterranean feast.

Another poignant observation: on more than one occasion I have watched a chilled butterfly take flight, only to be snatched by a bird seemingly from out of nowhere. I presume the bird sensed some erratic behavior, seizing the moment for a quick meal. (As an aside, larvae are not exempt from cool-downs, either. I have observed larvae of Gulf Fritillary butterflies so chilled on their passionflower hosts that they are unable to fend off offensive ants.) To conclude, in the real world the vast majority of free-flying butterflies—as well as their immature stages—fall victim to other organisms, both great and small.

Even healthy individuals often become victims, but understandably, "seniors" are especially vulnerable. And while their demise may be unheralded, their nutrient-rich bodies become entwined

within the unbiased universal "circle of life." That said, back to those artsy butterflies. Just what is their origin?

Some are netted alive in the wild and then killed; some are rummaged as dead specimens from butterfly conservatories. But to procure a flawless specimen for mounting, the insects must be hand-reared. This "butterfly husbandry" has been perfected by a constellation of cottage industries known as butterfly farms and ranches, located principally within tropical countries. Larvae are raised on their host plants. After pupation, the chrysalises are shipped via rapid air-transport to clients ranging from managers of butterfly conservatories, collectors, and artists and craftsmen.

Upon arrival, the pupae are pinned into a secure position so that the butterflies can emerge safely. If the butterflies are to be used in collections or artwork, once ready to fly, the specimens are dispatched—generally by a quick, forceful pinch to the thorax. When confined, the wings of butterflies quickly become too damaged for use as display. Not villainous, butterfly agriculture is actually garnering praise from scientists. You see, generally, a portion of each butterfly brood is released into the wild, safeguarding natural stock in habitats often under human pressure. And on a broader scale, the income has a positive impact on national economies, many of which operate "hat-in hand" with little money normally allocated for wildlife protection. And so, the signage so proudly displayed in some museum shops is partially valid.

To conclude, if you have the opportunity to visit an enterprise marketing butterfly art, I suggest you engage the manager in a conversation on butterflies and their life spans—especially their final days. If the individual is naïve, seize the opportunity to educate. Your knowledge could inspire others to butterfly stewardship. Also, suggest to the proprietor that his/her honesty might even boost sales!

Note: The photos on pp. 44 and the back cover are objets d'art *from the author's collection. See descriptions on back cover...*

Backyard butterflies...

Life History of *Priamides anchisiades idaeus*, Fabricius 1793

Miguel E. Chumpitasi

Apartado 1106 -2150 Moravia, San Jose, Costa Rica, ***echumpi@racsa.co.cr***

Place:

Los Angeles de Santo Domingo, Heredia, Costa Rica Altitude: 1160 m

Sequence of Events:

Nov. 28, 2001: Female seen placing eggs on *Cytrus* sp. (Rutaceae). Eggs round yellow, over 30 in number, placed in cluster.

Dec. 5: First larvae hatch.

Dec. 9: All larvae have hatched (over 30), stay clustered in fresh leaf. Amber color.

Dec. 17: All larvae eating well, 6 mm approx length. See photo on pp. 41.

Jan. 11, 2002: Larvae mostly clustered in one leave, largest ones are separate in larger leaves. Size: 20 - 25 mm. (except one). Still amber color but starting to show faint white lines. Soft & clean body surface. Synchronous eating habits.

Jan. 19: Only 16 larvae seen. Approx. size: 35 - 40 mm. Color switches to light brown. Around 20 larvae escaped when the mesh sleeve (placed around the branch) opened in strong wind. Unfortunately a wasp, *Parachartegus apicalis* (Vespidae) (identified by Ronald Zuniga, INBIO), was seen placing eggs on the larvae. Before this episode no shed skins were seen within the cover. Only one dead larvae was seen near the tree. All remaining larvae placed apart on cut branches in water in seclusion.

Jan.30: First larvae, now dark brown with lateral small tubercles, abandon hostplant to become pre-pupae.

Jan.31: First two pupae fully formed. Remaining larvae are 50-60 mm in length. Some are found dead. Pupae: brown (see photo) with green thorax patches resembling a small twig.

Feb. 6: Four more pupae form. Two larvae found drowned in water container holding *Cytrus* branch.

March 1: Two of the 6 pupae become very dark.

Apr.6: First adult ecloses (female, FW length 54 mm). The two dark pupae were empty, marked as unborn.

Apr. 10: A small rodent ate two pupae. (My wife insisted I throw it away! So no ID folks, sorry). I am concerned because the place in which I placed the pupae was a "fortress."

Apr. 18: The last pupae ecloses (male, FW length 51 mm). It pupated within a closed mesh container so was lucky to not be in the "safe" fortress. So only two adults out of over 30 eggs.

Life History Summary:

7-8 days as eggs, 56-63 days as larvae, 65-77 days as pupae.

Migration...continued from pp. 39

The direction of the butterfly flight paths ranged from the east to the SE with an average direction ca. ESE (see map, pp. 39). The Queens flew 1–2m above the ground over flat desert terrain with low vegetation. The flight paths of individual butterflies were very directional and both sexes flew rapidly and were not seen feeding or resting. At one point, about midway along the route, a count of migrants passing through a plane 20m wide perpendicular to the flight path was 35 per minute. There was little wind and the direction of the butterflies' body axes appeared to be the same as the flight path direction.

Site 2 (Chihuahua Woods Preserve, Hidalgo Co., Texas) and Site 3 (Sabal Palm Audubon Sanctuary, Cameron Co., Texas).

In Texas at two sites in the Lower Rio Grande Valley, migrant Queens were seen traveling along directional flight paths on October 25, 1998 from 14:30 to 16:30h CDT at the Chihuahua Woods Preserve and on October 20, 2002 from 15:00 to 16:30h CDT at Sabal Palm Audubon Sanctuary. At Chihuahua Woods the flight direction varied from the south to the SW with a mean direction of ca. SSW (see Figure). These butterflies flew rapidly 1–4m above the ground, ascending when tall vegetation obstructed the flight path. A count of migrants passing through a plane 20m wide perpendicular to the flight path was 30 per minute. The breadth of these migrations was at least 10-km across. The direction of the migration at Sabal Palm Audubon Sanctuary was southward (see map, pp. 39).

At both Texas sites some Queens had interrupted their directional flight to feed while others in the same area continued flying southward.

Discussion

Queens are strong fliers and their occasional appearance far north of their normal northern range as vagrants (Moscowitz 2002; also pp. 62 in this issue) suggests that they could successfully complete long distance flights to the south as well. The direction of the *D. g. strigosus* migration observed on the northern plateau of México would, if continued, take the migrants to the western slope of the Sierra Madre Oriental. In the mountains the Queens could ride thermals to continue on a southward migration with an energetically less expensive method of flight. Monarch butterflies may change their flight direction to follow mountainous terrain and also ride thermals when not flying over flat terrain (Calvert 2001). We have far less information about Queen migration, however, so the Sierra Madre Oriental could be a final destination for this population and perhaps for some of the south Texas population as well. Certainly their final destination remains a mystery to be solved.

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The Lives of Butterflies: Tails & Tales

Harry Pavulaan

***More on the Death's Head Moth* (Acherontia atropos).**

After Pat Durkin's article in the last issue of the News on A. atropos *was sent to press, Ian Kitching at the Natural History Museum in London published a brilliant scholarly article on the phylogeny of these moths with a discussion of the relations between these moths and honeybees, from whose combs the moths steal honey. The article appears in Systematic Entomology (2003) 28:71-88.*

Ian also graciously provided pertinent information. Van Gogh's "Death's-Head Moth" is an accurate depiction of Saturnia pyri. *In the movie "The Silence of the Lambs," the moths seen flying around the house near the end of the film are* Manduca, *as are the pupae in all likelihood (but you hawk-moth freaks already knew that). The "squeak" of* A. atropos *is made by rapidly drawing air into and out of the pharynx while the epipharynx acts as a reed. Thanks Ian. What fascinating moths!*

Bob Robbins

Searching for the elusive *Megathymus yuccae*

I would guess that most of you have not seen an adult Giant Skipper in the field. I have not. Neither has Harry Pavulaan, who authored the following article and spends a lot of time in the field. Fortunately, Dr. George O. Krizek has and he has courteously provided a photo of an adult Giant Skipper, M*egathumus yuccae*, photographed at Vero Beach, Florida, 24 March 1976, to satisfy our curiousity (see pp. 40).

Why is Harry writing about adult butterflies that he has not seen? Well, I guess that is his point. Read on...

This article continues a series of light-hearted columns about the lives of Lepidoptera (and Lepidopterists). Contact the author of this installment, Harry Pavulaan at 494 Fillmore St., Herndon, VA 20170. Contact series editor, Bob Robbins, at the Department of Entomology, NHB 127, NMNH, Smithsonian Institution, Washington, DC 20560-0127, (202) 357-2353, **butterflytales@hotmail.com**

Being winter at the time of this writing, I look out at the dreary Washington D.C. sky and long to be in the field again. Thoughts of journeys past come to mind as I recall getting a jump on spring in earlier days. Those of you in the Carolinas and southward can't appreciate the kind of cabin fever that we endure yearly, especially those of us in the New England states, where the first springtime Mourning Cloak, Cabbage White or Spring Azure brings excitement in mid-April. The date March 31 especially comes to mind.

In years past, that magic date was immediately marked on the first new calendar for the coming year. I would join a small group of Maryland collectors to make our annual cabin fever-busting pilgrimage to southern North Carolina. Our winged friends have already been flying in the Green Swamp for several weeks by late March, but that date marked the approximate emergence of the much sought-after *Incisalia irus*, *Mitoura hesseli* and *Atlides halesus*, among others.

The hunt for one butterfly, *Megathymus yuccae*, conjures up memories more than the others. These skippers, in their adult form, always eluded us, but we developed a knack for locating colonies without actually finding the adults. I read somewhere that the adults fly toward dusk. Driving around southern North Carolina, we could locate small groups of the hostplant, *Yucca filamentosa* (the popular cold-hardy ornamental kind), along highway shoulders by watching for the characteristic sea urchin-shape of these plants. Occasionally, a roadside group of Yucca plants meant that a larger stand was present in a field or woods nearby, which increased one's chances of locating the skippers. Abandoned structures are good because Yuccas, being ornamentals, frequently "escape" and naturalize themselves in groups once left untended for many years.

From a moving car, the trick to locating plants harboring the distinctive larval nests (also known as "tents") is to look for weaker, sickly and yellowish plants rather than wasting time stopping for healthy green plants. Once you've spotted a potential site, don't slam your brakes and swerve into a ditch like I once did, but carefully pull off the road and walk back. To find evidence of the skippers, walk around and visually inspect the centers of the plants. Again, large healthy plants with active terminal growth won't have the nests. Search for smaller, thinner plants without active terminal growth.

It does not take long to find the distinct larval nest that looks like a narrow piece of dog poop sticking straight up into the air from the center of a plant (generally, there will only be one nest per plant, but rarely there may be two). These are generally brown but may occasionally be blackish. An active larval nest is sealed at the top, which shelters a larva (until about early March when they pupate) or a pupa anticipating a warm day in late March.

Unless you specifically intend to collect larvae or pupae, absolutely do not attempt to open the top of a sealed nest or pull it off the plant, as this will expose the inhabitant to the elements and to parasitic wasps and flies. Larvae can reseal a nest but the pupae obviously

cannot. Inactive (old) nests will already be open at the top. If they contain some white dusting around the opening, the adult has just recently emerged and you just missed it. However, look carefully, as the adult may be sitting or flying somewhere close by. I have not seen live, wild adults, since I never thought to look for them at dusk. If the open nest appears blackish inside, it is an old nest, from the previous year. The nests will stay in place for about a year or more before deteriorating, but still serve as "proof" that the butterfly was present the previous year.

In days gone by, collectors would remove an entire plant to retrieve an active nest. These days, in light of ever-increasing regulations governing the removal of plants, it would be wise to determine the regulations for the state in which you intend to collect. However, one method of collecting pupae is still favored by some. This method is rather simple but requires great patience and time. When a nest is disturbed, the pupa will drop down into the feeding tunnel. The top of the sealed nest can carefully be cut open. After a considerable period of time, the pupa will wiggle its way back up into the nest and try to find the top. Since the top is open, the pupa will stick out and can be removed with the greatest of care.

If your intention is to document the butterfly with physical proof, but not necessarily a specimen, an empty nest is an ideal alternative. These can be removed from the plant by cutting or pulling them off the plant. Year-old nests usually come off quite easily (note that the tunnel goes straight down into the plant). However, just as you would do with butterfly specimens, it is important to record the date when the nest was "collected." An increasingly popular method of recording the presence of butterflies is by means of photography. Yucca Skipper nests can be photographed to provide ample proof to establish a record. My recommendation is to provide photographic evidence of the nest (close-up), the entire plant, and a view of the habitat. The latter will provide important habitat documentation for future studies.

The northernmost limit of *M. yuccae* is uncertain. The species was recently discovered in Kentucky and should be sought in other areas north of the known range. If your goal is to survey and document new butterfly locations, your job is essentially done once you have found a nest. Some are under the impression that one must see adults themselves to document the presence of a species. The nests are proof enough. However, if you enjoy looking at butterflies or wish to photograph the adults under natural circumstances, return to the location during the first really warm spell in late March or very early April. Timing has to be just right. Once the adults have emerged, they may stay "on site" at small clumps of roadside plants for only a few hours after they have emerged and dried their wings before moving on. In large stands of Yuccas, they may linger for several days. Seeing one of these impressive Skippers in the field will make you forget you ever had cabin fever!

Metamorphosis...

Lt. Col. John Nevill Eliot

of Taunton, Somerset, England, on 11 April 2003. J. N. Eliot was a well-known authority on Oriental Lycaenidae and Hesperiidae. His numerous publications include the 1983 book (co-authored with A. Kawazoé), *Blue Butterflies of the* Lycaenopsis *Group*.

Leon Bryant Mather, Jr.

known to the Society as Bryant Mather, of Clinton, Mississippi, on 4 December 2002. Bryant, a retired cement chemist, was an indefatigable moth collector who sent his collections to a wide variety of specialists, asking only for the return of representative named specimens as he helped build an inventory of the Lepidoptera of Mississippi. Bryant was a Charter Member of the Society who subsequently became a Life Member of the Society in 1959. Bryant's generous support of the study of Lepidoptera continued even after his death—he bequeathed a portion of his estate to the Society.

Hazel Irene Tilden

of San Jose, California, on 24 February 2003, at the age of 82. Hazel and her husband, Charter Member and legendary butterfly authority Dr. J.W. (Bill) Tilden, were regular fixtures at Pacific Slope meetings, to which they drove in their familiar camper van. After Bill's death in 1988, Hazel continued her membership in the Society until her passing.

Admiral Butterflies: the Lords of Misrule

Paul Manton

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Flick through the television channels with the remote control, stopping on each channel for no more than a few seconds before moving on to the next. In rapid succession, images appear and vanish. First a game show, then a sitcom then a talk show, then a car commercial, and so on. Now create a plot or story line incorporating all of these images and you have the elements of most dreams. From the meaningless imagery of dreams, to the shapes we conjure in billowy clouds, to the grimacing faces we see leering out of rock formations and wood grain, to the menacing tendrils of shadows on the forest floor, the human mind is hardwired to discern order out of chaos.

Most specimens of perceptual psychology possess of threatening or frightening aspect: the creek on the stairs at night, the eerie feeling of being followed while tramping through the woods on a gray and overcast day, and the occasional twinge of jittery nerves whilst sitting alone in a house—the feeling that there is someone else in the room. Artists and writers have long exploited these perceptual tricks and illusions. The best ones can frighten not with a horror which is seen, but by the horror which is unseen. Perhaps one of the scariest scenes ever written by horror writer, Stephen King, involves nothing more than an eerie sensation or "psychological cold pocket" as King called it.

> "He took Gage up the stairs, walking through hot slanting September sunshine, and as he reached the landing, such a premonition of horror and darkness struck him that he stopped—stopped cold—and looked around in surprise, wandering what could have possibly have come over him...Louis's arms and back had broken out in great rashes of gooseflesh. What's wrong? he wondered, confused and frightened. His heart was racing; his scalp felt cool and abruptly too small to cover his skull; he could feel the surge of adrenaline behind his eyes...'Christ, it really feels as if something just brushed by me in this hallway, something I almost saw'."

The true terror of this scene is in the "almost." Perhaps somewhere in the dim evolutionary past, in our proto-mammalian phase, interpreting shapes and forms unseen (but something we almost saw) had an adaptive value. Making out the toothy reptilian form camouflaged among the Mesozoic vegetation most certainly saved some of our furry little ancestors.

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For years, the question of whether or not other vertebrate species share our perspective of the world has been mired-down in the controversial debate about anthropomorphism. If, for example, birds are not startled by the eyespots of Owl butterflies (*Caligo* sp.) or the uncanny resemblances that are enshrined in mimicry complexes, why do Lepidopterans possess these characteristics? Too many species resemble things that are foul-tasting, sting, or potential predators to be a coincidence. And since the chief predator of diurnal Lepidopterans are birds whose stereoscopic, 3-D, technicolor eyesight is rather like ours, it's safe to assume that they see Hymenopterans when they gaze at bee moths and wasp moths, Monarch butterflies when they spy Viceroys on the wing, and big eyes in the hind wings of the *Polyphemus* moth.

Indeed, without knowing the term, I have had a number of non-entomologists, independent of one another, describe the snake's head pattern on the forewings of Atlas moths. Non-entomologists are the best control group we have (even if it's unclear why anyone wouldn't want to be an entomologist).

Perceptual psychology can be brought to bear on the question of taxonomy. Frequently non-entomologists feel compelled to report that yellow butterfly they saw in their garden earlier in the week. Our conversation usually runs something like this: "I saw a beautiful yellow butterfly the other day." "What kind of butterfly?" "It was a yellow one." "No, I mean what species?" "I don't know. It was just a regular butterfly."

A regular butterfly? What's a regular butterfly? There are tens of thousands of species of Lepidoptera in the world. Every individual butterfly that exists has to be a member of species A or species B or species C, and so on. There is no generic, regular, plain butterfly—or anything else. Oftentimes, my wife and I shop in those latter day Five & Dimes called "dollar stores." These stores sell such kitschy items as

butterfly lapel pins, butterfly earrings, and butterfly sun catchers. Some are delightfully crafted, beautiful objects. Indeed, last Fall, I gave her a green, gold, and red butterfly lapel pin which she wears around the holidays and calls "the Christmas butterfly." I didn't mention that *Papilio demoleus* is sometimes called that—although not for its color scheme. Others are not so well made. Invariably, though, I am asked "what kind of butterfly is this?" If the pin in question is intended to replicate an actual species,

I inform her while holding my tongue about whatever flaws or entomological inaccuracies might be present. More interesting, however, are those generic, decorative pieces that are supposed to capture the essence of the butterfly's beauty without reference to entomological detail. They get right the general Lepidopteran configuration. But even they , if subconsciously, abide by certain identifying characteristics—scalloping, ocelli, chevrons, lunules, swallowtails, and such. Imagining a butterfly or moth that possesses none of the types of patterns, wing shapes, or venation found in existing genera and families is like asking someone to imagine a whole new primary color.

I don't blame my non-entomological friends for thinking the way they do, however. The manner in which we classify things is oftentimes circumscribed by cognitive structures that have little to do with their actual relationship Just consider those silly word association tests given by psychiatrists in TV reruns: I say a word and you say the first thing that comes to mind.

Doctor: "Dog." Patient: "Cat."
Doctor: "Day." Patient: "Night."

I don't take much stock in this methodology. Even those inkblots all look like Lepidopterans to me. Do people really think "cat" when they hear the word "dog"? Or do they respond "cat" because that's the answer that's expected? Most people justify their answer by saying that "the opposite" of dog is cat. But how can a dog or cat have an opposite? I mean, a dog is a dog and a cat is a cat. Other than a common evolutionary ancestor millions and millions of years ago—and a more recent domestication by a third, unrelated species a few thousand years ago—what relationship between the two really exists? If "opposite" means having characteristics that are fundamentally dissimilar, it could be argued that the opposite of "dog" is "sea slug." (Imagine what a psychiatrist would do with that).

The ease at which we can make such specious associations in our minds rather than see things in their own right, as existing in of themselves, tends to confuse our attempts to discern genuine relationships and the system of relationships we call taxonomy.

The student of the biological sciences needs, Edward O. Wilson noted, "to sail a perilous course between pesudo-explanatory reductionist atomism and stuptifying non-explanatory holism". Like a ship endeavoring to run a tight naval blockade, we endure a relentless broadside to both our port and starboard. In theory we could simply burn and sink to the bottom; forevermore buried beneath the ocean of post-modern philosophy (or anti-philosophy) which maintains the subjectivity of truth itself. But such a scenario is unlikely.

Entomologists will never throw up their hands to such an unending wellspring of contention, revision, and contrariness as taxonomy. Even William Morton Wheeler suggested that the Hereafter would be peopled by rewarded souls free to roam the Elysian meadows netting breathtaking specimens while the condemned would spend eternity perplexed and tormented by taxonomy.

Reductionism reaches its—well, *reductio ad absurdium*—in the affirmations of "scientific creationism" which holds all species to be fixed, absolute, immutable (if highly flexible) Platonic types ordained by the Creator. Holism reaches its extreme when taxa are deemed so arbitrary at every level (especially species at the genetic level) as to have little real meaning. Lysenkoism, a Marxist-Leninist school of thought that flourished under Stalin's reign would be the corresponding ideological extremity. Note the irony that it is a reductionist approach to the species question *vis á vis* molecular genetics that has the greatest potential to usurp the traditional Biological Species Concept and exile it to the limbo or the arbitrary. In case you have not noticed, I defend the BSC, albiet on philosophical grounds.

Legend maintains that Ernst Haekel, Darwinism's chief proselytizer in Bismarckian Germany, was once asked how it was that the bumblebee could fly when the laws of aerodynamics as understood at the time suggested that this feat should not be possible. "Because," Herr Haekel was reputed to wryly note, "the bumblebee does not know it is not supposed to fly." Indeed, American admiral butterflies currently belonging to the genus *Basilarchia*—White admiral (*B. arthemis*), Red-Spotted purple (*B. astyanax*), Viceroy (*B. archippus*), Lorquin's admiral (*B. lorquini*) and Weidemeyer's admiral (*B. weidemeyerii*)—have been hybridizing without paying deference to the sensitivities of taxonomists who might prefer their taxa neat and tidy and uncomplicated by such ambiguities. They have been getting on with their lives oblivious to the fact that they were once classified with their old World cousins, *Limentis*. Like Haekel's bumblebees, they don't know what we expect of them.

Lepidopterists are not the only ones who struggle to make sense of taxa that have evolved over time and that have what appears to be a fixed basic unit flanked by more arbitrary ones. Linguistics is essentially an evolutionary and taxonomic field that parallels the BSC. In fact, many of the issues that tend to characterize one can be observed in the other except for one: languages, even languages from unrelated families, can recombine whereas hybridization in nature only occurs between closely-related species with a

direct ancestral relationship.

It is a curious world in which linguists face the same problems entomologists face with respect to taxonomy. When, for example are two persons speaking separate dialects of the same language and when are they speaking two separate languages? (This always makes me think of Oscar Wilde's quip about England and America being two nations separated by a common language). The linguist's answer to the BSC's "interbreeding populations" is "mutual intelligibility." In other words, if two organisms can mate and produce fertile offspring, they are considered the same species. Likewise, if two people can hold a conversation, they are speaking the same language. Anyone who lives in a major American city with its many immigrant groups, however, knows that the latter quickly encounters accents and dialects and individualized inflections and tones, not to mention genuine linguistic hybrids or "pigeon languages" such as "Spanglish." But we don't conclude that there are no languages or dialects, only individual speakers (after all, who would the individual speakers be talking to?).

Nor do we toss out the rules of grammar, spelling, and punctuation. We acknowledge that language is an evolutionary phenomenon and that the English spoken in 2350 will sound and look as different from English today as did English back in 1650. In my 41 years, I have seen Standard American English evolve. By "evolve," I don't mean simply expand in volcabulary. I mean, in the manner in which words are used. In 1961, nobody would have said "issues" when they meant psychological problems and the word "community" referred to a neighborhood, not a group of people sharing some arbitrary proclivity or affiliation. Indeed, "culture" was used to mean either the total way of life of a people or the fields of the humanities such as art or music. But not simply a general atmosphere or mood. A sentence like "The culture of this company is such that management has many issues when dealing with the gay community." would not have made much sense in 1961. It would not have been clear that what the speaker was trying to say was that the company is not sympathetic towards homosexuals.

Still, we read books and newspapers, write notes, send e-mails, gossip, fax things over, shoot the breeze, and BS. We believe everything we read and don't listen to what other people are saying. But the one thing most of us can agree upon, is that all our platitudes, clichés, simplistic aphorisms, and unheeded words of advise are in plain, simple English. Recently, even the most gobbly-gookophonic politicians have come to accept that "words have meaning."

Politicians and lawyers, each equally skilled in the use (or misuse) of language, are a good model for the problem of taxonomy. Politicians are akin to the "lumpers" who broad brush and simplify every issue. They don't mind throwing many distinct species of ideas into one-size-fits-all genera. Lawyers, by contrast, are clearly "splitters." With this lot, every subspecies of an idea is a separate species. Screeds given before a jury or in a campaign speech clearly show the problems entomologists must address when attempting the classification of new taxa.

According to evolutionary biologist, Richard Dawkins, taxonomists who endeavor to take evolutionary relationships into full account (cladists, for example) are both cursed and blessed by the limitations of the fossil record. The dearth of many transitional forms makes it difficult to piece together many evolutionary lineages in exacting detail. But an overabundance—say if every fossil that could exist, did—would be even more problematic.

To take Dawkins' example one step beyond, suppose that on Resurrection Day the Creator brings back to life every living thing that has ever crawled on the land, swam in the sea, or taken to the skies. This biological bonanza should, in theory, allow taxonomists and evolutionary biologists to fill in every gap; a complete record of life, all life. But, alas, the whole system of classification would fall apart into billions and billions of pieces and each of those pieces would be an individual organism. Suddenly the point upon which speciation occurs would vanish.

Our species, *Homo sapiens*, is believed to have evolved from *Homo erectus* about 400,000 years ago. But when? On March 6, 398,235 B.C.? Or was it on June 3, 412,364 B.C.? The distinction between *H. sapiens* and *H. erectus* are real. The evolution of one into another is real. But the exact time and place is not. There never was a single *H. erectus* whose son was the very first *H. sapiens*. The transformation was a gradual and highly uneven process. We say, for example, that a species is defined by interbreeding populations who can produce fertile offspring. And yet, once in a while a horse and a donkey—clearly two distinct species—will produce a mule. Mules are sterile. But, again, every so often, a fertile mule is discovered. The separation between horse and mule is a work in progress.

Perhaps this is what *Basilarchia* hybrids represent; speciation on the wing. What I personally find to be most intriguing about these crossbreeds is that "of the 86 specimens recorded, more than 60 percent involve crosses between the viceroy (*Limenitis archippus* (Cramer)) and the red-spotted pur-

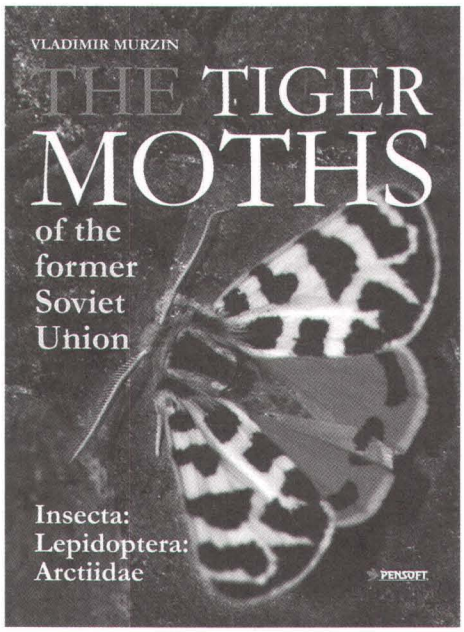
ple (*L. arthemis astyanax* (Fabricius)),"
according to the recent article by Gary Noel Ross and Craig W. Marks. Of the five American *Basilarchia* butterflies—Viceroy, Red-Spotted Purple, White Admiral, Lorquin's Admiral, and Weidmeyer's Admiral—it is extraordinary, indeed, to sit down and contemplate that hybridization occurs most frequently between the two that resemble each other the least. How wonderfully chaotic! What delightful lords of misrule!

But as the beginning of this article suggested, order can arise from chaos where perceptual psychology comes into play and sometimes those perceptions have real adaptive advantages and disadvantages in the wild. The generation of entomologists that saw mimicry and startle effect as mere anthropomorphism (and you know who you are) could never have appreciated Ross' and Marks' in-the-field observation of these hybrids which is worth repeating here:

> "During that survey we noticed a butterfly dart from a black willow growing along a roadside slough. The butterfly flew about 30 feet (9 meters) before disappearing within high vegetation bordering a roadside ditch. Our first appraisal was 'red-spotted purple', a common species. However, there was a disconcerting flash of orange".

This observation brings to mind the manner in which, in an off-handed way, Henry Walter Bates noted back in the 1840's that mimetic butterflies that appear quite distinct when they are mounted in the lepidopterist's display case are often quite indistinguishable when on the wing.

Hybrid admiral butterflies may be at a selective disadvantage. But how illustrative of a universe that teeters between order and chaos, continuum and reductionism. Long live these lords of misrule!



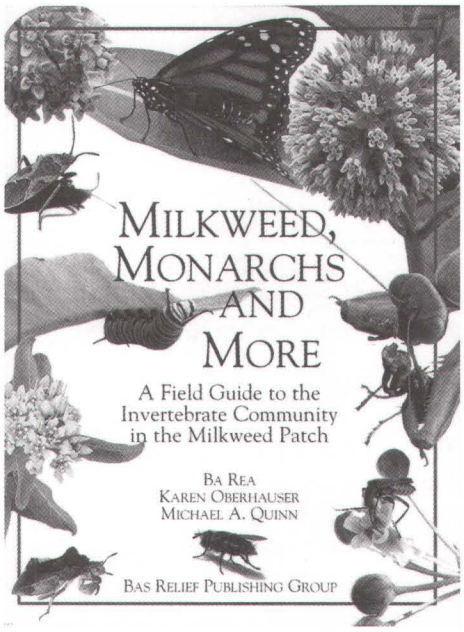
New Book...

The Tiger Moths of the Former Soviet Union (Insecta: Lepidoptera: Arctiidae).

by Vladimir Murzin. Pensoft Series Faunistica 23, ISSN 1312-0174. ISBN 9546421332, Pensoft Publishers, Sofia-Moscow, 210x290, color jacket, 50 color plates, species listings, catalog, b/w drawings, keys, index. In English. Hardback, 250 pp. Price EURO 89.00. Surface mail delivery EURO 7. Airmail delivery overseas EURO 26.

A monographic treatment of tiger moths, the Arctiidae, of the former Soviet Union covering most of the Palaeartic fauna including more than 100 species and subspecies. Many full color photos of pinned specimens (arranged in 24 plates) and a variety of live moths and/or their characteristic habitats. The book contains keys and a summary of literature and unpublished data from Russia, over 80 color photos and drawings, 27 color plates, a cross-reference index of moths & hostplants, a rich bibliography and very useful indexes.

The author has one of the largest privately owned collections of Lepidoptera in Russia, is a member of the Russian Entomological Society, and is the author of several books.



New Book...

Milkweed, Monarch and More: a Field Guide to the Invertebrate Community in the Milkweed Patch

by Ba Rea, Karen Oberhauser and Michael A. Quinn. ISBN 0-965-7472-2-0. Bas Relief Publishing Group. 96 pp.

This new "little book" features more than 300 full-color photos and entries on the wide variety of invertebrates associated with Milkweeds in North America. The book includes an overview of insect and arachnid body structures, explanations of terms and concepts, an overview of the unique features of the milkweed family—including photos, range and identifying features for 10 of the 110 species found in North America—easy access to information through the table of contents and index, plus a glossary and references. A true field guide, this 96 page book will fit easily in the back pocket of your jeans.

Available ($9 each, $7.50 a copy for orders of 20 or more, Shipping $2.50 for orders under $16, $4.50 for orders $16-30, $6 for orders of $31-60, $8 for orders over $60) from: Bas Relief Publishing Group, P.O. Box 426, Glenshaw, PA, 15116. For more information visit ***www.basrelief.org*** or email Ba Rea at ***barea@basrelief.org***.

The Marketplace

***IMPORTANT NOTICE TO ADVERTISERS:* If the number following your advertisement is "444" then *you must renew your advertisement* before the next issue! Remember that all revisions are required in writing.**

Books/Videos

Used Books for Sale: Used books and some journals, mostly Lepidoptera, i.e. Strecker, Packard, Fabricius. For a printed list send SASE #10 business envelope with $.80 US postage. For faster access, the list is available at: ***my.ohio.voyager.net/~spruance/booksale/booksforsale.txt*** or I will send the list via email. Send request to: ***spruance@infinet.com***. Thanks for your interest. Eric H. Metzler, 1241 Kildale Sq. N., Columbus OH 43229-1306. 451

For sale: Seitz, A., **Macrolepidoptera of the World**. German ed., First division: Palaearctic Regions, Volumes I to IV. Plates and German text are bound separately in 1/2 morocco. Volume I (1909): 89 plates/3470 specimens; Volume II (1912/1913): 56 plates/2489 specimens; Volume III (1914): 75 plates/4338 specimens; Volume IV (1915): 25 plates/1977 specimens. All in firm binding without damage to spines and corners. Best offer >US$ 2,500. Dr. Baldhard Falk, P. O. Box 315, Belvedere, CA 94920-0315, ***falktibrn@aol.com***. 451

Livestock

NO ADVERTS!

Specimens

Wanted: The less common species, subspecies and forms of *Heliconius* and *Eueides*. Willing to trade or purchase. Contact me for list of the forms I need. Ronald Flaspohler, 504 Glendale, Parchment, MI. 49004, (269) 345-4653, ***flaspohler@wmich.edu*** 452

Butterflies from the Neotropics and Holarctic, later from Africa and Asia. Very large selection of hard to obtain butterflies. Please visit ***www.theinsectcollector.com*** or ***www.insectcollector.com***. Want to trade all American *Papilio*, mainly ssp's of *P. indra*. Robert Westphal, Calle Llimoner 6, E-43892 Miami Playa (Tarragona) Spain, Tel/Fax: ++34-977-810787 452

I have a rich variety of *Charaxes* and Papilionidae from Africa available. List available on request. Wanted: *Charaxes*, Papilionidae from East and Southern Africa, *Prepona* from South America. Giancarlo Veronese, Viale Venezia 138-33100 Udine (Italia), Fax: ++39-0432-232654, ***gc.veronese@virgilio.it*** 451

Parnassius, Papilionidae, Nymphalidae, Pieridae, Lycaenidae, Satyridae, Nanaidae, Hesperiidae, moths, stag beetles, Carabidae, Lucanidae, Scarabaeidae, Cerambycidae, Curculionidae, Elateridae, Odonata, Cicadidae, Buprestidae from China. Mr. Ng Yuk-Ming, Room 414, Trans Asia Centre, 18 Kin Hong St., Kwai Chung N.T., Kowloon, Hong Kong. Fax: 0852-27440979, 0952-24283926. Phone: 0852-24011392. 451

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

No mention may be made in any advertisement in the **News** of any species on any federal threatened or endangered species list. For species listed under CITES, advertisers must provide a copy of the export permit from the country of origin to buyers. **Buyers must beware and be aware.** Advertisements for credit, debit, charge cards or similar financial instruments or accounts, insurance policies and those for travel or travel arrangements cannot be accepted because they jeopardize our nonprofit status.

Only members in good standing may place ads. All advertisements are accepted, in writing, for two (2) issues unless a single issue is specifically requested and must be renewed before the deadline of the following issue to remain in place. All ads contain a code in the lower right corner (eg. 386, 391) which denote the volume and number of the **News** in which the ad. first appeared.

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

Send all advertisements to the Editor of the News.

The Lepidopterists' Society and the Editor take no responsibility whatsoever for the integrity and legality of any advertiser or advertisement. Disputes arising from such notices must be resolved by the parties involved, outside of the structure of The Lepidopterists' Society. Aggrieved members may request information from the Secretary regarding steps which they may take in the event of alleged unsatisfactory business transactions. A member may be expelled from The Lepidopterists' Society, given adequate indication of dishonest activity.

Buyers, sellers, and traders are advised to contact your state department of agriculture and/or PPQAPHIS, Hyattsville, Maryland, regarding US Department of Agriculture or other permits required for transport of live insects or plants. Buyers are responsible for being aware that many countries have laws restricting the possession, collection, import, and export of some insect and plant species. Plant Traders: Check with USDA and local agencies for permits to transport plants. Shipping of agricultural weeds across borders is often restricted.

For Sale: Large collection of Iranian butterflies, perfect quality with data. Papiliondiae, *Colia chlorocoma*, *C. sagarttia*, *C. hofmannorum*, *C. aurorina*, *C. thisca*, *Colitis zegris*, *Euchloe lessei*, *Anthocharus damone*, *Archon apollinus*, *Allancastria deyrollei*, *A. louristana*, *Hypermnestra helios*, *Melitaea*, Lycaenidae, *Agrodiaetus*. Many species from other families available. Ahmad Karbalaye, P.O. Box 11495-175, Tehran, Iran. Phone/Fax: 0098-21-7531604, ***karbalaye@yahoo.com*** 451

For Exchange: Oriental Lycaenidae (Thailand, Vietnam, Philippines, Malaysia, Indonesia) in exchange for other lycaenid species worldwide (except South America). Single specimens as well as longer series or lots (with full collecting data) are very welcome. I will also buy. Stefan Schroeder, Auf dem Rosenhuegel 15, D-50997 Koeln, Germany, ***ste.schroeder@gmx.net*** 443

Equipment

FOR SALE: Quantum Black Light Bulbs. 100% more effective that current 350 black light bulbs. The new bulbs are the first advancement in UVA light technology in over 50 years. Available in 15 Watt 18" (F15T8), 20 Watt 24" (F20T12), 40 Watt 48" (F40T12) and 22 Watt Circline (FC8T9). Interchangeable with 350 black light bulb and operate with the same ballast. For a free color brochure and price list, contact: Leroy C. Koehn, 202 Redding Road, Georgetown, KY 40324-2622, 502-570-9123; ***Leptraps@aol. com***. 451

For Sale: Traps for Collecting Lepidoptera. **Light traps:** 12 Volt DC or 110 Volt AC with 15 watt or 20 watt black lights. Portable and easy to use. Rain drains and sorting screens protect specimens from damage. Straight tube design provides 360 degree light visibility. Stainless steel or plexiglass vanes. **Bait Traps:** Three types available, Tropical, Inverted Funnel and Flat Bottom. 25" W x 36" H, nylon coated fiberglass screen with heavy cloth top, plastic zipper in side for access, and a plywood platform. Optional shroud/hood provides dark area for moths to hide. For a free color brochure and price list, contact: Leroy C. Koehn, 202 Redding Road, Georgetown, KY 40324-2622, 502-570-9123; ***Leptraps@aol. com***. 451

For Sale: Used Light Traps. Several used traps offered, all self-fabricated and in good to excellent condition. For prices and photos, please contact: Leroy C. Koehn, 202 Redding Rd., Georgetown, KY 40324-2622, 502-570-9123, ***leptraps@aol.com*** 443

Miscellaneous

Help! South America in 1986? Does anyone remember participating in a collecting trip to South America during the periods May 3-8 and/or September 25-30, 1986? I have a lot of neotropical papered material with no data except dates, all of which fall into those two periods. There's a chance the specimens

continued on pp. 56

Membership Update...

Julian Donahue

This update includes all changes received by 31 May 2003.

"Lost" Members

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

Kersten, Sharon (Cameron, Texas)
Orwig, Timothy T. (Sioux City, Iowa)

New/Reinstated Members:

members who have joined/renewed/ been found/or rescinded their request to be omitted since publication of the 2002 Membership Directory (not included in the 2000 Membership Directory; all in U.S.A. unless noted otherwise)

Bower, Fred: 288 Willow Street, Apt. 53, Lockport, NY 14094.
DeBruyne, Danielle (Ms.): [address omitted on request]
de Jong, Rienk (Ph.D.): Spoorlaan 6, 2471-PA Zwammerdam, **Netherlands.**
deMaynadier, Phillip: Maine Dept. of Inland Fisheries & Wildlife, Wildlife Resource Assessment Section, 650 State Street, Bangor, ME 04401-5654.
Dunbar, David J. (MBE): [address omitted on request]
Gallusser, Stephanie: Calla Pa Merced S/M, Tatapoto, **Peru.**
Gibson, Nate: P.O. Box 96, Patagonia, AZ 85624-0096.
Grossman, Richard: 800 Heartood, Bayfield, CO 81122-9382.
Haines, William: [address omitted on request]
Hardesty, Richard L.: P.O. Box 130158, Coram, MT 59913-0158.
Hedges, Frank R.: 211 Laco Lane, Burnet, TX 78611-5709.
Hoyson, James: 88 Ridge Street, Shavertown, PA 18708-1526.
Kramp, Joshua L.: 775 South Prospect Street, Marion, OH 43302-6275.
Larson, Paul: 920 Delaware Street SE, Apt. 2001, Minneapolis, MN 55414-3083.
Nagle, Richard W.: P.O. Box 86, Montour Falls, NY 14865-0086.
Parks, Robert B., Jr.: 3908 Wightman Street, San Diego, CA 92105-2436.
Romer, James C.: 7991 East Hampden Circle, Denver, CO 80237-1405.
Smith, Joseph H.: 35 Corte Morada, Greenbrae, CA 94904-1311.
Tet, Paul G.: 814 East Fornance Street, Norristown, PA 19401-2667.
Williams, Benjamin D., III: P.O. Box 211, Pomfret Center, CT 06259-0211.
Winer, Adam: 40 26th Place, Apt. 305, San Mateo, CA 94403-2356.

Address Changes

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

Cannon, Marvin S. (Dr.): 3405 Dallis Drive, College Station, TX 77845-5924.
Dauphin, Jan (Mrs.): 410 Taurus Street, Mission, TX 78572-6516.
Duarte, Marcelo: Universidade Federal de Mato Grosso, Instituto de Biociências, Departamento de Biologia e Zoologia, Av. Fernando Correa da Costa, s/n, 78060-900 Cuiabá, Mato Grosso, **Brazil.**
East, Raymond (Randy) James: 808 Lakecrest Avenue, Apt. 110, High Point, NC 27265-2173.

continued on pp. 47

Market...*continued from pp. 55*

were collected on a group trip, and if you took part in such an expedition, please tell me where you went. Any help or clues appreciated! Contact John Hyatt, 423-343-0067 (h) or ***jhyatt@eastman.com*** 443

Research Requests

Wanted: Correspondence with persons interested in any of the following (Nearctic and Palaearctic species only): Papilionidae, Sphingidae, Arctiidae, *Catocala*. Exchange of livestock and/or specimens a possibility. Stephen Miller, 11200 Township Rd., Browns Valley, CA 95918, U.S.A. 451

Slide Exchange: I need A1 color slides of Phyciodes texana seminole from Florida and am able to trade for it with slides of Nearctic, Neotropical and/or Palearctic species. Please call 202-234-2401 to make arrangements. George O. Krizek, 2111 Bancroft Place, N.W., Washington, D.C. 20008. 451

Commercial

Fluttering Encounters in the Amazing Archipelago, a book by Jan Pasternak. The 30-year odyssey of a lepidopterist/naturalist in Papua New Guinea and Indonesia searching to unravel the secrets of the mystical Ornithoptera. Spectacular photos, field notes and memoirs of an epic journey to historic localities tracing footsteps of the legendary naturalists A.R. Wallace, A.S. Meek, Pratts and others. Describes the life histories and habitats of virtually all species of Ornithoptera found in PNG, Indonesia and Australia. Includes field notes and photos of many other butterflies from the author's 30 years of field studies in this fascinating archipelago. Published 2000, HC, 23 × 30 cm, 136 pp, 204 color photos. Not many copies left. Limited offer at reduced price, USD $75, shipping inclusive. Orders to Jan Pasternak, Rigrova 12, CZ-61200 Brno, Czech Republic, ***janarchipelago@aol.com***.

Nature Writing Awards Presented

Gary Noel Ross

6095 Stratford Avenue, Baton Rouge, LA 70808, ***gnr-butterfly-evangelist@juno.com***

On Monday April 7, 2003, The John Burroughs Association, Inc. met in the newly restored Astor Turret of the American Museum of Natural History in New York City for its literary award celebration. Founded in 1921, the association presents three prestigious awards for published natural history writing: John Burroughs Medal Book Award for Outstanding Book (77th annual), John Burroughs Award for an Outstanding Published Nature Essay (10th annual), and The John Burroughs List of Nature Books for Young Readers (14th annual). Winners for 2002 are:

Book: *Eye of the Albatross: Visions of Hope and Survival* by Carl Safina (Henry Holt and Company)

Essay: "Voices from the Past: What can we learn from the extinction of the Rocky Mountain locust" by Jeffrey Lockwood (*Orion* magazine, 20th Anniversary Issue, Vol. 21, No. 3)

Books for Young Readers (6): *Animals on the Trail with Lewis and Clark* by Dorothy H. Patent, author, William Munoz, photographer (Clarion); *Crows! Strange and Wonderful* by Laurence Pringle, author, Bob Marshall, illustrator (Boyds Mill Press); *Henry David's House* by Steven Schnur, editor, Peter Fiore, illustrator (Charlesbridge); *Looking for Life in the Universe: The Search for Extraterrestrial Intelligence* by Ellen Jackson, author, Nic Bishop, photographer (Houghton Mifflin Co.); *Paisano, the Roadrunner* by Jennifer O. Dewey, author, Wyman Meinzer, photographer (Millbrook Press); and *The Shape of Betts Meadow: A Wetlands Story* by Meghan N. Sayres, author, Joanne Friar, illustrator (Millbrook Press)

Criteria for the awards include good literature, vivid presentation, poetic content, personal viewpoint, and scientific accuracy. Additionally, judges consider texts that stress the author's own connection with nature involving either original natural history research or one's own life experience. Ordinarily, texts that principally record someone else's research or life experience with nature are not considered. It is even better when texts combine John Burroughs's kind of accurate description with an engaging, felicitous style.

Left to right: Joan Burroughs, great granddaughter of John Burroughs, with Jennifer Sahn, editor of Orion magazine, who accepted the Essay Award on behalf of winner Jeffrey Lockwood, and the author of this report, Gary Noel Ross

Although none of the latest honorees was a lepidopterist, the winner of the essay award is an entomologist (University of Wyoming), an alumnus of my alma mater (Louisiana State University), and yours truly reviewed the essay at the award luncheon.

Having won the essay award myself in 1996 for "Butterfly Wrangling in Louisiana" (*Natural History* magazine, May 1995), I have been serving as juror on the essay committee for the last several years. I was delighted at the opportunity to assist with the award presentation to a fellow entomologist. As an aside, fellow lepidopterist and longtime member of this Society, Robert Michael Pyle (*Chasing Monarchs, Handbook for Butterfly Watchers, The Audubon Society Field Guide to North American Butterflies,* and *The Butterflies of Cascadia*) won the Burroughs Medal Award for his book *Wintergreen* (Charles Scribner's Sons) in 1987.

Unfortunately, Dr. Lockwood could not attend the presentation. Because of prior commitments, the author had departed on March 31 for Central Asia! However, Ms. Jennifer Sahn, an editor with *Orion* magazine, was present to read Dr. Lockwood's prepared acknowledgment and accept the award conferred by Ms. Joan Burroughs, great granddaughter of the late JB.

"Voices from the Past" focuses on the Rocky Mountain locust (*Melanoplus spretus*), commonly called the Rocky Mountain grasshopper. The orthopteran once existed in numbers beyond human comprehension. During the early settlement of this country, the insect had a breeding range that covered nearly two million square miles. The Second Report of the U.S. Entomological Commission in 1880 accurately describes a single migratory swarm in 1875 that lasted five days and extended 1,800 miles long and 110 miles wide, covering 11 New England states! Authors estimate that the swarm

contained nearly ten billion insects, making it the largest concentration of any single species known. Just 30 years later, nary a specimen could be found! And with the collapse of this species, whole ecosystems and human history were forever changed. So, what happened?

Since Lockwood's subject was extinct, the scientist's research required the sleuthing skills of a forensic pathologist. To begin, he examines hundreds of the carcasses and bits of bodies, once frozen but recently exposed by glacial melts in the Rocky Mountains due to global warming. Then, he combs both scientific and popular publications for historic references. In the end, he weaves an intriguing tale that opens a unique window into North America's natural history. The author's hypothesis is that during the locust's non-migratory phase, the insects reproduced in the fertile alluvium of the river valleys throughout the Midwest. Highly desirable, these areas were quickly converted to farmland by pioneer sodbusters. Voila! The locusts were no more! No pesticides, only human hands wielding wooden plows brought it down. Today, North America has the dubious distinction of being the only inhabited continent without an indigenous locust.

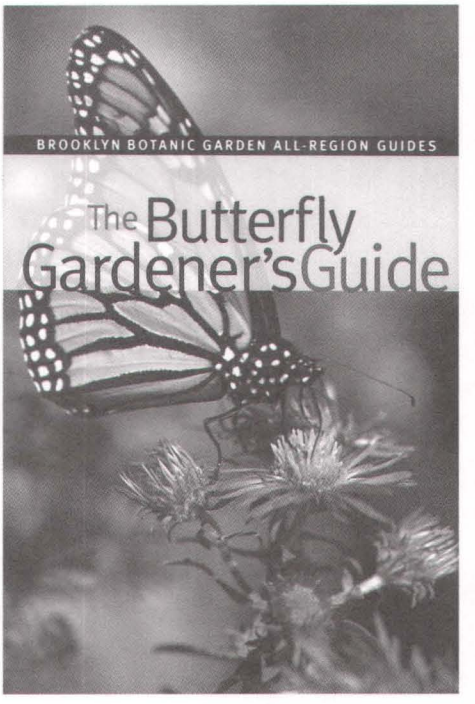
Because, like many lepidopterists and butterflyers, I am particularly interested in the Monarch butterfly, another migratory insect whose numbers are extremely high (a mere two billion!), I found "Voices from the Past" personally titillating. But, I must admit, the essay goes far beyond sensational mathematics. The author concludes with several intriguing questions: what would happen if we were to suddenly discover a remnant colony of locusts tucked somewhere in a pocket of farmland? Would we champion the creature as an endangered species, or would we rush to exterminate it as a pest? Indeed, haunting questions. And for those of us with a penchant for the monarch, an important lesson is that exceptional numbers does not guarantee future survival.

In the front jacket to *The World of John Burroughs* by Edward Kanze (Henry N. Abrams, Inc., 1993), the editor states: "John Burroughs (1837-1921)—naturalist, ornithologist, author, poet, and teacher—is perhaps best remembered today as one of the earliest and most articulate pioneers of what is now known as the conservation movement in the United States. Burroughs published twenty-eight books between 1867 and 1922, writing about literature as well as nature, and earning a popularity in his time as great as that of his contemporaries and kindred spirits, Henry David Thoreau and John Muir. Many of his writings are still in print."

The mission statement of the John Burroughs Association, Inc. proclaims: "To foster and promote the spirit and teaching of John Burroughs, father of the American Nature Essay, by annually honoring outstanding natural history writings, and to cherish and preserve tokens of his life especially the cabin Slabsides and the surrounding lands of the John Burroughs Sanctuary [the Catskills of New York]." The Association is a charitable organization, headquartered at the AMNH on Central Park West, New York City. Membership provides *Wake-Robin*, the official newsletter of the association (published three times per year), as well as the privilege to participate at all association events. Dues range from $25 per year to $500 for life. The award celebration is held the first Monday in April (to honor JB's April 3rd birthday) and is attended by officials and members of the Association, award recipients, writers, editors, publishers, illustrators, photographers, and press.

If interested in becoming a member of the John Burroughs' Association, contact:

Lisa Breslof, Secretary, The John Burroughs Association, Inc., American Museum of Natural History, 15 West 77th Street, New York, New York 10024, Telephone: 212-769-5169, Fax: 212-313-7182, ***breslof@amnh.org***, website: ***research.amnh.org/burroughs/***



New book...

The Butterfly Gardener's Guide!

edited by Claire Hagen Dole, 2003.

With just a few of the simple changes described in Brooklyn Botanic Garden's new book, *The Butterfly Gardener's Guide,* you can transform your backyard into a haven for beautiful butterflies. Learn how to turn even a small property into a miniature wildlife refuge in any region. BBG's second book of its new *All-Region Guides* series is a necessary addition to every gardener's bookshelf. The 120-page book features spectacular portraits of many of North America's most common butterflies, as well as inspiring color photos of their favorite flowers—which also happen to be some of the most beautiful bloom in gardens. Unlike other books on butterfly gardens, it is written by butterfly experts and explains how you can nurture butterflies as they transform from eggs to colorful caterpillars to the stunning butterflies that gracefully flit from flower to flower.

Chapter topics include: An illustrated guide to butterfly biology, Turning your yard into a butterfly sanctuary, Helping butterflies through the winter, How to

design butterfly borders and meadows, Herbs that butterflies love, and an encyclopedia of the best butterfly and caterpillar plants for each region

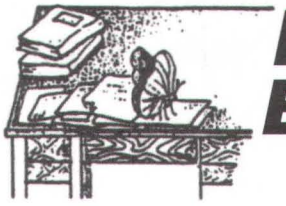
Claire Hagen Dole, was publisher and editor of *Butterfly Gardeners' Quarterly*, a national newsletter, from 1994-2001. She has written on wildlife gardening for *Country Living*, *Organic Gardening*, *American Gardener* and *Audubon*. Contributors to *The Butterfly Gardener's Guide* include butterfly biologists and gardeners from every region, including Oregon, California, Arizona, North Carolina, Pennsylvania, New Jersey, Texas, Wisconsin, Florida, and Nova Scotia.

The Butterfly Gardener's Guide (ISBN 1-889538-58-2) is available through Sterling Publishing Co., Inc. in bookstores and at garden centers for $9.95 in the U.S./$15.95 in Canada. For wholesale ordering information, call Sterling Publishing at 800-367-9692 or visit their web site at ***www.sterlingpub.com***. For retail and individual book sales, visit ***www.bbg.org*** or call (718) 623-7286. To receive a free brochure of current and past handbook titles, call (718) 623-7289.

Season Summary Errata

I'd like to thank Jim Tuttle and Phil Schappert for a great job on the 2002 Season Summary, however, I found 2 mistakes for TX, (both of which are mine). *Timochares ruptifasiatus* from Nueces Co. was entered twice. Killian's US record for *Copaxa mananna* in the comment should read "Voucher specimen CONFIRMED by CWB." I do not have the specimen, nor did I take it, if anyone misconstrued it that way. If you have found any mistakes or omissions, feel free to openly let us know what they are (except for nomenclature). Jim and I will work on that this year. I wish to thank all of the contributors, who also did an outstanding job! Keep 'em rolling in! Thank you.

Charles Bordelon, Zone 6



From the Editor's Desk

Phil Schappert

Hi all,

My apologies to everyone for the lateness of this summer issue—I had grand plans but simply wasn't able to follow through on them. Life is busy!

Note also that just because I said that I had leftover submissions from the last issue is no reason to stop submissions entirely! Only a few submissions have arrived since Christmas and little of that has had color illustrations so we have a somewhat truncated issue this time out. And the cupboard is bare...

And, for what I believe is the first time in living memory, there is not a single livestock advertisement in this issue. My take on this is that the lead time required for printed adverts has made the 'net a far more attractive option for those who deal in live caterpillars and pupae. But I'd like to be wrong...

So, needless to say, we need your articles, opinions, thoughts, sightings, photos and notes, etc. Have you been one of those who've noticed that recent issues are being dominated by a very few authors? This might bother some of you (and I'd like to see some more variety myself) but remember that if it wasn't for these authors there would be no News at all.

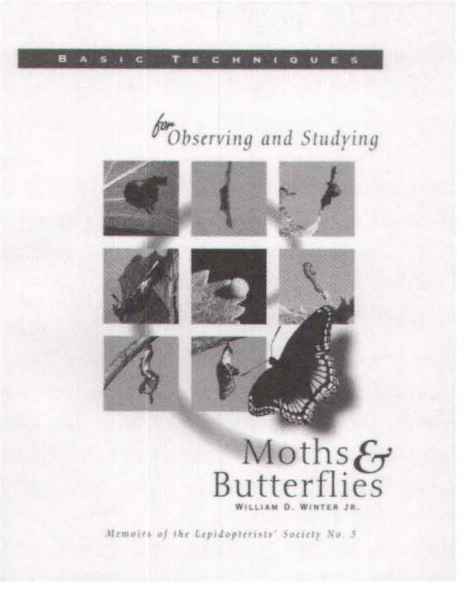
I sometimes wonder if I'm all alone in Lep-land with Ed and Charlie and Gary and George and Bob! Hey! Is there anyone out there?!? As I've said, there's now nothing waiting in the wings and I won't be able to put an issue together until you people start sending your submissions in...

Keep 'em coming folks!

Editor Phil

Announcement...

Basic Techniques for Observing and Studying Moths & Butterflies



by William D. Winter.

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

To get your copy, send check or Money Order for $29.00 (Members), $44.00 (Non-members), postpaid (Canada add $6.00; other countries add $10.00), made payable to "The Lepidopterists' Society," to:

Ken Bliss, Publications Mgr.
P. O. Box 1366, Edison, NJ 08817

Pterourus appalachiensis Pavulaan & Wright in Alleghany County, Maryland

George O. Krizek

2111 Bancroft Pl. NW, Washington, DC 20008

On 1 May, 1977 I collected a large male "*Papilio glaucus*," in a very rich entomological area of Alleghany County, Maryland, called" 15 mile creek," within the "Green Ridge State Park." I took it "on flight" at about 10:00 AM. When I look at it now, I discover that it is a typical male of the recently named *Pterourus appalachiensis* Pavulaan & Wright (see the Taxonomic Report of The International Lepidoptera Survey, Vol. 3, No. 7, 15 June 2002).

The length of the FW is 60 mm and the FW underside shows a typical *canadensis*-like yellow submarginal band. Also the HW shows a pattern typical for the holotype mentioned above.

I present here dorsal and ventral photos of the specimen taken on 1 May 1977, and I include a photo of the locality—here a characteristic "shale barrens" area of the Transition zone. I also illustrate a typical *P. glaucus* (dorsal and ventral), as well as a typical *P. canadensis* (dorsal and ventral), for comparison. The *P. glaucus* FW length is 55 mm, and the specimens were taken on 8.August 1972 at Fauquier County, Virginia (dorsal), and on 3 September 2002 in Seneca, Montgomery County, Maryland (ventral-lateral). The *P. canadensis* was taken on 24 June 1969 in McMillan Township, Ontario, Canada. FW length is 45 mm.

Some other butterflies that I observed in the same region or life zone (shale barrens) included *Euchloe olympia* (1 May, 1977), *Glaucopsyche lygdamus* (1 May, 1977), *Calephelis borealis* (19 July 1977), *Pyrgus centaureae wyandot* (28 April 1978), *Amblyscirtes vialis* (19 July 1977) and *Erynnis martialis* (19 July 1977 and 28 April 1978).

Texas Wasp Moth Collected in Central Illinois

Jeffrey D. Prill

1410 S. Lammers Street Peoria, Illinois 61605

On the evening of June 12th, 2001, while collecting at a Mercury vapor light set up at my family home in Peoria, Illinois, I discovered a male specimen of the Texas Wasp Moth, *Horama panthalon texana F.* resting on the sheet. Covell cites records from Texas and Florida (pg. 77). Dietz and Duckworth (pg. 9) list it only from Texas with a record from Northeastern Texas along the Texas-Arkanasas border. There were no records cited for this moth further north than Texas. Upon asking Charles Covell in July of 2001, I was informed that he had not seen the moth in Kentucky. I placed an advertisement on ***Insectnet.com*** on June 18, 2001, to inquire about further records, I received no answers, suggesting that there were no known records anywhere else in the Northeastern States. Upon checking the records at the Illinois Natural History Survey, I discovered no Illinois records. I did not receive a reply from the Chicago Field Museum of Natural History. I also inquired about records on the USGS U.S. Moths Website, and received no reply. Despite the silence, I have decided that I still have enough information to conclude that this is a New Illinois State Record. I also believe that it is the first time that this species has been collected in the Northeastern Region of the United States.

The record was published in the 2001 Season Summary of the Lepidopterists Society (pg. 45), but the details had not been submitted as an official written record. For the record, there was only one capture of this moth. The date August 26, 2001 is the date of capture for another moth that I collected and is a mistake which was not found on my original draft for my collecting data for the year 2001.

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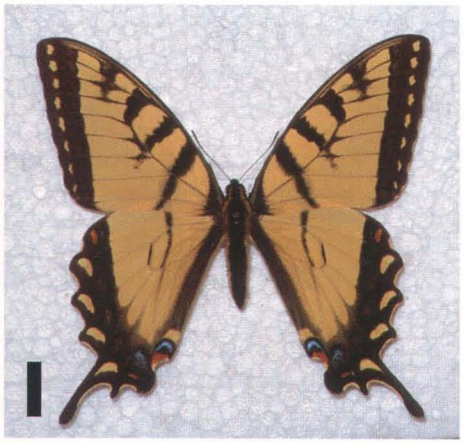

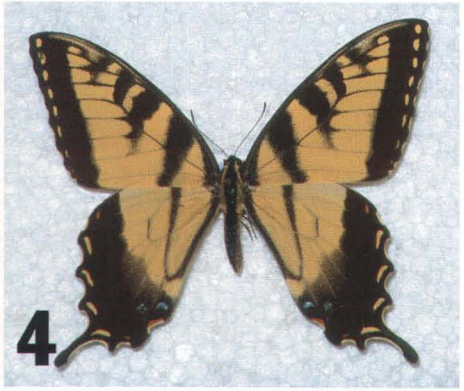

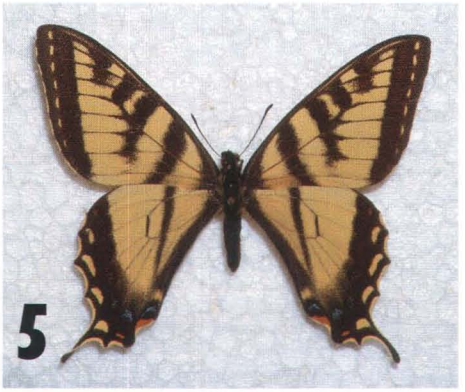

Pterourus appalachiensis, Alleghany Co., Maryland

1: *Pterourus appalachiensis*, male, 1 May 1977 Green Ridge St. Park, Alleghany Co, Maryland; **2:** same, ventral; **3:** *P. glaucus*, male, typical ventral coloration of FW. 3 September 2002, Seneca, Montgomery Co, Maryland; **4:** *P. glaucus*, male, 8 August 1972, Fauquier Co, Virginia; **5:** *P. canadensis*, male, 24 June, 1969, Ontario, Canada; **6:** same, ventral; **7:** "Shale barrens," Transition Life zone, Alleghany Co, Maryland. Locality for *P. appalachiensis*.

All photos by George Krizek.

m 718

The Queen (*Danaus gilippus* Cramer) Dilemma in the Northeastern United States

David P. Moskowitz

EcolSciences, Inc. 75 Fleetwood Drive, Suite 250 Rockaway, N.J. 07866

For the second year in a row there were numerous reports of the Queen Butterfly (*Danaus gilippus* Cramer) in the northeastern United States. As many as 32 butterflies were reported between July and October, 2002 from as far south as Huntley Meadows, Virginia, to as far north as Lewiston, New York (Table 1), a marked increase from the astounding five reports of 2001 (Moskowitz 2002). Prior to 2001, there were only two reliable reports of the Queen north of North Carolina: a record from Nantucket Island, Massachusetts in 1934 (Jones and Kimball 1943), and another from Jamestown, Rhode Island in 1998 (pers. comm. H. Pavulaan). Incredibly, the 2002 reports included possible mating by a pair in New York City, and a caterpillar that was found and successfully raised to adult on Common Milkweed (*Asclepias syriaca)* in Woodbury, Long Island, New York (pers. comm. R. Dirig, Lowe 2002).

There has been a great deal of speculation whether the reports indicate a natural movement of the species, or are resulting from anthropogenic means. Unfortunately, the origin of the butterflies is confounded by a number of factors including the presence of both the southeastern (spp. *berenice*) and southwestern (spp. *strigosus*) subspecies; the movement of milkweeds (*Asclepias spp.*) as horticultural stock from the South into the Northeast; multiple individuals at the same location; a release of the species from the Tavern on the Green in Central Park, New York City; and by their display at butterfly houses. Although there is no evidence of Queens escaping from these facilities, they offer at least a potential, although probably unlikely route of dispersal in the Northeast. Further complicating the issue is that the Queen is a strong flier, and there does not seem to be any reason that natural movement into the northeastern United States cannot occur (pers. comms. M. Gochfeld, A. Grkovich, H. Pavulaan, H. Zirlin; Fiore and Wallstrom 2003). It has been suggested that in prior years, Queens may have been overlooked because of few butterfly watchers (pers. comm., H. Pavulaan), but the unusual number of sightings this year, many by experienced observers, seems to challenge this hypothesis. Interestingly, the phenomenon of extralimital Queen sightings was not limited to the Northeast in 2002. Queens were also reported from Washington State in July and August and at least one of the butterflies was apparently the southeastern subspecies, strongly suggesting that this individual originated from an anthropogenic source (Glassberg 2002).

Assuming at least some of the butterflies arrived in the Northeast without human assistance, two possible routes have been suggested: for spp. *berenice*, a coastal route that many other late season southeastern immigrants apparently follow, and for spp. *strigosus*, an inland route along major drainages that many late-season midwestern species apparently utilize (Pavulaan 2002, Zirlin 2002). Although this may offer a plausible explanation for some of the reports, particularly for sightings along the coast, it does not seem to adequately resolve the reports of multiple individuals occurring at the same location at the same time. A number of possibilities exist to explain these reports. While these reports could represent butterflies that migrated together, it seems more likely that they reflect a local origin, perhaps related to horticultural stock or nearby releases. It has also been suggested that these small "groupings" of butterflies may represent the progeny of adults that migrated into the area in early summer and laid eggs that successfully developed (pers. comm. Pavulaan). These adults may have overwintered far north of their normal range as a result of the unusually mild winter in the northeast in 2001. Pavulaan (pers. comm.) has also suggested that there may be reason to suspect that the mild winter also affected the distribution of other southern butterflies in 2002, as Zebra Heliconians (*Heliconius charithonia*) were found in southeastern Virginia and Ithaca, New York, Gulf Fritillaries (*Agraulis vanillae*) migrated north in record numbers into western Virginia and then as far north as southern New Jersey, and a Soldier (*Danaus erisimus*) was also found in southern New Jersey.

The unprecedented number of reports of the Queen in the northeastern United States over the past two years clearly presents a dilemma regarding the status of the butterfly. If the butterflies are arriving naturally, and the trend continues, then our understanding of their distribution in the Northeast may need to change from an extremely rare to a relatively common immigrant, or perhaps an irruptive species, at least based on the past two years. However, if the presence of the butterflies is anthropogenic, particularly as escapes or by intentional releases, then they speak volumes for the need to mark imported individuals so that their origin can be quickly determined, or for regulations banning their release. Perhaps diligent searches of milkweeds (*Asclepias spp.)* at garden centers in the Northeast will reveal whether horticultural stock is providing a route of entry. In any case, until the status of the Queen in the

northeastern United States is better understood, all sightings of the species should be reported to one of the major regional websites that track butterflies. Photographs and a determination to subspecies should also be obtained when possible.

Acknowledgments

I am deeply indebted to Tom Fiore, Kristine Wallstrom and Harry Pavulaan for providing extensive information on the 2002 Queen reports, to Robert Dirig for his review of the manuscript and information on New York sightings, to Harry Pavulaan and Phil Schappert for their reviews of the manuscript and helpful comments, to Becki Parris for help with the table, and to EcolSciences, Inc. for the time and financial support to prepare this paper.

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Table 1. Queen reports in the northeastern United States in 2002.

Date	Location	Subsp.	Condition	Comments
June ? (late)	Huntley Meadows, VA	NR	NR	Photographed
July ?	Pelham Bay Park, Bronx, NY	NR	NR	
July 5, 6	Morris Arboretum, Phila., PA	NR	Good	Low Scale Loss
Aug. ? (Early)	Central Park, NYC, NY	NR	NR	
Aug. 3	Sailors Snug Harbor Botanical Gardens, LI, NY	*berenice*	Very Good	
Aug. 10	Jamaica Bay Wildlife Refuge Queens, NYC, NY	NR	Somewhat battered	missing part of one wing
Aug. 10	Woods Hole, MA	NR	NR	Possibly 2, flying
Aug. 12	Metheun, MA	NR	NR	
Aug. 13	Cornell Univ. Ithaca, NY	*berenice*	1 battered	4 individuals
Aug. 17	Artpark, Lewiston, NY	NR	NR	4 reported, 2 confirmed
Sept. 3	Woodbury, LI, NY	*berenice*	NR	Caterpillar raised successfully on *A. syriaca*
Sept. 8	Blue Heron City Park, SI, NY	NR	Good	
Sept. 8	Bryant Park, NYC, NY	NR	Fairly good	3 individuals
Sept. 10	Marblehead, MA	*strigosus*	NR	
Sept.11, 12	Central Park, NYC, NY	*berenice*	Fairly fresh	
Sept.11, 12	Central Park, NYC, NY	*strigosus*	Good	
Sept. 18	Central Park, NYC, NY	NR	Slightly worn	possibly related to butterfly release at Tavern on the Green
Sept. 19	Cornell Univ., Tompkins Co., NY	NR	Fresh Male	
Oct. 4	Cape May Pt., NJ	NR	Female	
Oct. 5	Linwood, NJ	NR	Male	Soldier reported at same location 10\6
Oct. 5	Cayuga Lake, Tompkins Co., NY	NR	Fresh	Newly eclosed male

New Publication

Scientific Names List for Butterfly Species of North America, north of Mexico.

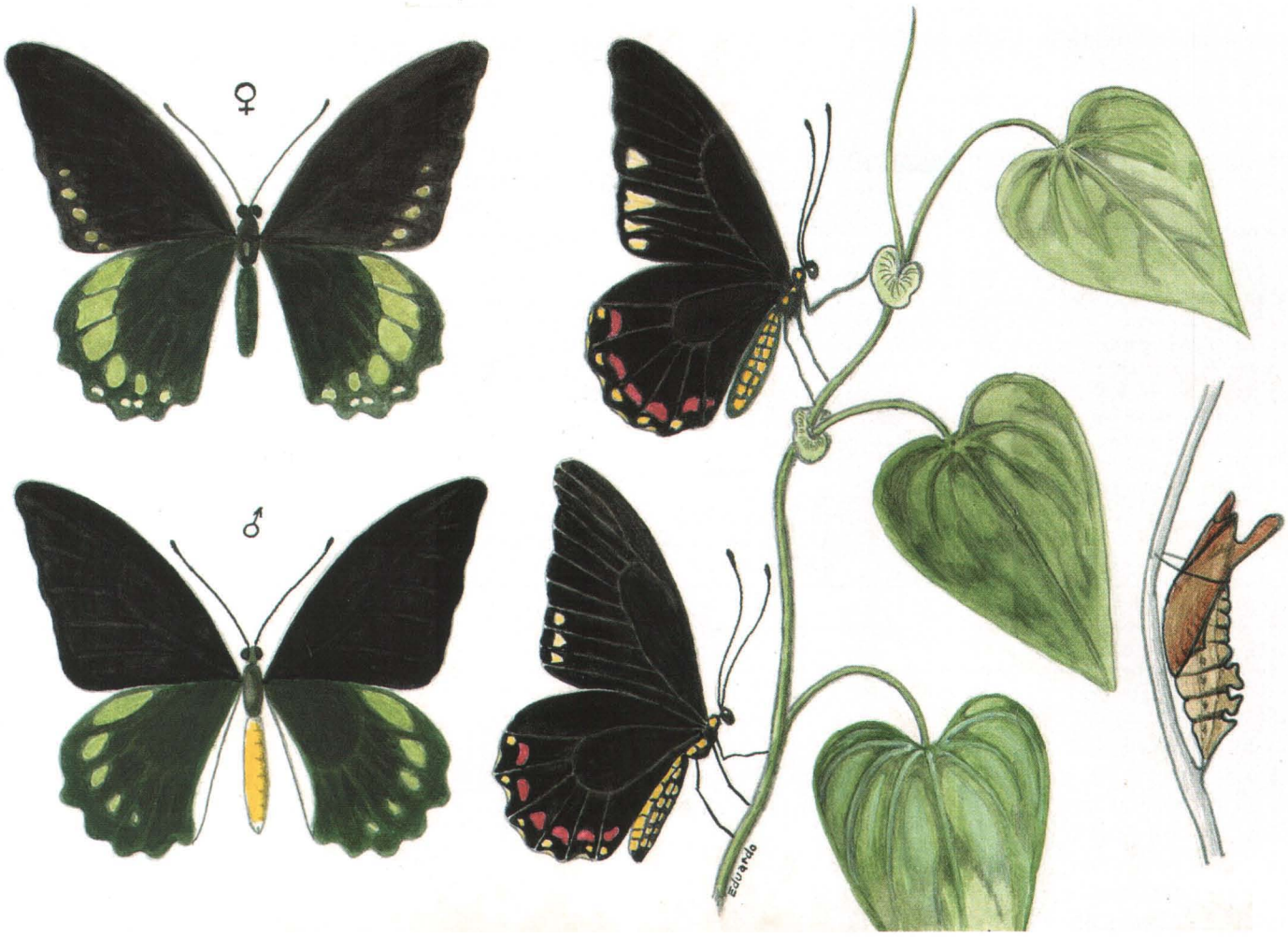
by P.A. Opler and A.D. Warren. 2002. Contributions of the Gillette Museum of Arthropod Diversity.

This is the first list of scientific names of North American butterflies prepared and reviewed by systematists since that of C.D. Ferris (1989).

This list is 83 pages in length, has clear plastic cover, black plastic back cover, and black coil binding for durability. It contains the most current scientific names for 780 butterfly species (Papilionoidea and Hesperioidea). Authorship and date of publication (many corrected) are included. The original spelling of species names is given in accord with recent practices. Annotations with literature citations are given for many of the names as explanation for their current usage. Species are numbered for curatorial purposes. No subspecies are included in this list in anticipation that they will be included in the Synonymical catalogue in preparation by Jonathan Pelham. Significant input was provided by many lepidopterists, but especially by Gerardo Lamas (author of Neotropical checklist [in press]) and Jonathan Pelham (synonymical catalogue of North American butterflies in preparation).

Also included are a list of Hawaiian butterflies and a list of species names excluded from the North American fauna (with brief explanations). The strength of this list is not only its currency, but the fact that approximately 480 references are provided that substantiate the names provided.

Payment ($18.00, postage paid) should be made to "Gillette Publications" and sent to same at Department of Bioagricultural Sciences, Colorado State University, Fort Collins, CO 80523 U.S.A.



Battus belus varus (Kollar) in Costa Rica

A drawing by Eduardo Chumpitasi (***echumpi@racsa.co.cr***) showing the slight sexual dimorphism between male and female, the pupa and the hostplant, *Aristolochia* sp. This is a relatively common solitary butterfly of lowland rainforests around La Guacima, Alajuela and El Rodeo, Colon, Costa Rica.

Opposite, Top: Another page from the profusely illustrated notebook of Liam O'Brien. This one is almost self-explanatory (but in case you can't read it, Liam's own caption (lower right of the graphic) is "Pornographic totem poles to human being's audacity, arrogance...and stupidity.")

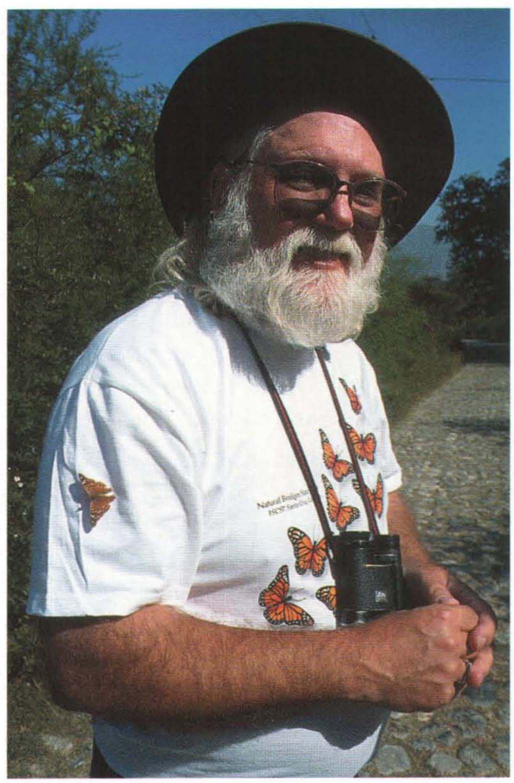
Opposite, Far Right: The "godfather of modern butterfly watching," Robert M. Pyle taken on a 1999 field trip at the Texas Butterfly Festival. As the photographer, Gary Noel Ross, notes in his article on pp. 57, Dr. Pyle (and Dr. Ross) are the only two lepidopterists who have ever won one of the coveted Burroughs Awards for Nature Writing.

Opposite, Right: Can anyone identify this butterfly? The photographer, Steve Grazer (***segraser@pacbell.net***), took the photo at Yasuni, Ecuador on September 5, 2002.

Broad-Winged Skipper, *Poanes viator*, near Houston, TX

Photographed 18 April 2002, c. 5 mi E of U.S. 59 and about 1/2 mi S of Beltway 8 (Harris Co., TX) by Robert A. Behrstock (***rbehr@ix.netcom.com***).


In mid-March, there's a field trip planned with the S.F.-N.A.B.A. group to the summit here to see the endangered "San Bruno Elfin" (Callophrys mossii bayensis) That sounds about right. It's when I saw and photographed (below) this little celebrity last year. Took me a coupla visits to distinguish it from the "Brown Elfin" (Callophrys augustinus) which it also flies with. No chance confusing it with the other Callophrys up there: C. dumetorum, the "Bramble Hairstreak" - its jade green. It's still a little early but we may see the other famous resident, the "Mission Blue", (Plebejus icarioides missionensis)
Today, however, when I woke up, I wanted to go see a part of the mountain that I was pretty sure we wouldn't be going to.
The entire tract development is called "The Ridge"
Looked to me this day building was nearing completion.
I saw it first in '97, on my way to San Bruno Mountain first N.A.B.A. Butterfly Count. They'd just bulldozed the streets out back then...
Let me see if I understand this...
We make known habitats available for development...habitat of three tenuously alive subspecies here (the third Speyeria callippe callippe - the "Callippe Fritillary")
We pave over their host plants...then we...
name the streets after the things that can't be there?!?
Is that right? Why...does all of this strike me so...incredibly...grotesque?
What helps me walk past this horrible mistake is the knowledge that a group of people - in the dead of night, snuck in and planted millions of violet and lupine seeds in amongst all those
The world needs more BUTTERFLY RADICALS!
22 FEB 03
San Bruno Mountain
Slope of North Hill
SAN MATEO CO., CA.
SAN BRUNO SUMMIT
"San Bruno Elfin"
Callophrys mossii bayensis
Pornographic totem poles to human being's audacity, arrogance and...stupidity
Mission Blue Dr
ELFIN CT
MISSION BLUE DR
MONARCH DR
MISSION BLUE DR
LUPINE VALLEY
CALLIPPE
SILVERSPOT DR
SILVERSPOT DR
STOP



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

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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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Submissions are always welcome! Preference is given to articles written for a non-technical but knowledgable 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 aand optical character recognition. Original artwork/maps should be line drawings in pen and ink or good, clean photocopies. Color originals are preferred.

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Material for Volume 45 must reach the Editor by the following dates:

Issue	Date Due
1 Spring	You missed it!
2 Summer	Gone by!
3 Autumn	**Aug. 29, 2003**
4 Winter	Oct. 31, 2003

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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Is this the fabled "Butterfly Graveyard?"

In this issue, Gary Noel Ross writes about the variety of butterfly *objets d'art* that are commercially available from museums, nature stores and other sources. See his article on pp. 44. The photo above (and those on pp. 44) are from the author's personal collection. The above is a landscape from the Philippines made entirely from butterfly wings. The photos on pp. 44 show a variety of "boxed" butterflies, a framed painted landscape from India with preserved specimens, art arrangements in plexiglas of mixed butterflies (from Butterfly World in Florida) and a pair of birds made from butterfly wings that the author obtained from West Africa.