

Vol. 26 NO. 2

June 30, 2004

THE OFFICIAL PUBLICATION OF THE SOUTHERN LEPIDOPTERISTS' SOCIETY ORGANIZED TO PROMOTE SCIENTIFIC INTEREST AND KNOWLEDGE RELATED TO UNDERSTANDING THE LEPIDOPTERA FAUNA OF THE SOUTHERN REGION OF THE UNITED STATES (WEBSITE: www.southernlepsoc.org/)

J. BARRY LOMBARDINI: EDITOR

FERALIA MAJOR J.B. SMITH IN SOUTHEAST LOUISIANA BY VERNON ANTOINE BROU JR.



Fig. 1. Feralia major J.B. Smith, male.

The pretty greenish noctuid moth *Feralia major* J.B. Smith (Fig. 1) occurs from Nova Scotia and New Brunswick and Ontario to most of the eastern United States from March-May according to Covell (1984). *F. major* is one of three species of *Feralia* covered in detail by Forbes (1954), who discusses the similarity and confusion of *major* to *Feralia jocasa* Guenee. Knudson & Bordelon (1999) report *major* occurring in Texas during January-February.

I have taken *major* commonly in only two Louisiana parishes (Fig. 2) mostly due to a lack of collecting by me during January in other areas of the state. The month of January has the coldest temperatures in Louisiana, the time at which *major's* peak flight period appears to occur. In over 22 years of continuous collecting in St. Tammany Parish, adult specimens have shown consistent bimodal flight peaks occurring at the end of December and end of January (Fig. 3). Whether or not the flight period peak is suppressed by the cold January temperatures or the bimodal flight peaks are a normal attribute is difficult to determine with confidence. Perhaps a much larger sample population may provide an answer.





Fig. 2. Parish records for Feralia major.

Fig. 3. *Feralia major* taken at sec.24T6SR12E, 4.2 mi NE Abita Springs, Louisiana. n = 832.

Literature Cited

Covell, Jr., C.V. 1984. A Field Guide to the Moths of Eastern North America. The Peterson Field Guide Series No. 30. Houghton Mifflin Co., Boston. xv + 469pp., 64 plates.

Forbes, W.T.M. 1954. Lepidoptera of New York and neighboring states, Noctuidae, Part III, Cornell Univ. Agr. Exp. St. Mem. 329. Ithaca, New York, 433 pp.

Knudson, E. and C. Bordelon 1999. Texas Lepidoptera Survey, Checklist of the Lepidoptera of Texas, 2000 edit.

(Vernon Antoine Brou Jr., 74320 Jack Loyd Road, Abita Springs, Louisiana 70420 email: vabrou@bellsouth.net)

CALYCOPIS ISOBEON (DUSTY - BLUE HAIRSTREAK) ATTRACTED TO BLACKLIGHTS

While blacklighting at Concan, Texas, during the Southern Lepidopterists Field Trip which occurred on May 21-23, 2004, 10 Dusty-Blue Hairstreaks were attracted to my blacklight and sheet behind my cabin. Thinking that this was unusual, I mentioned this to Ed (Knudson). By his expression and answer, he obviously wasn't impressed and just said something to the effect "Yea, they are attracted to blacklight". This reminded me of the time I mentioned to my physician that one of my toes was numb. When he ignored me I asked why he wasn't impressed. To this I received a shrug. I then asked, "What would impress you?" and the answer was "If all your toes were numb". I never did ask Ed what would impress him. [The Editor]

NEW MEMBERS

The Southern Lepidopterists' Society welcomes the following new members:

Nell Ahl 9026 South Tatum Ck. Rd. Lyles, TN 37098 Dan H. Hardy 2001 Plumbrook Dr. Austin, TX 78746 Robert D. Biro 8 Jamaica Run Dr. Savanna, GA 31410 Tom Allen 2120 SW 8th Court Cape Coral, FL 33991

VOLUME 26 NO.2 (2004), PG. 32

The Southern Lepidopterists' Society

OFFICERS

Robert Beiriger: Chairman 16356 Trafalgar Drive, East Loxahatchee, FL 33470 Bostrichid@mail.ifas.ufl.edu

Jeffrey R. Slotten: Treasurer 5421 NW 69th Lane Gainesville, FL 32653 E-Mail: jslotten@bellsouth.net

Irving Finkelstein: Secretary 425 Springdale Dr. NE Atlanta, GA 30305-3816

Paul Milner: Membership Coordinator 272 Skye Drive Pisgah Forest, NC 28768 E-Mail: pamilner@citcom.net

Marc Minno: Member at Large 600 NW 35th Terrace Gainesville, FL 32607 E-Mail: <u>afn10853@afn.org</u>

Dave Morgan: Website Manager 4935 Shadowood Parkway Atlanta, GA 330339 E-Mail: davemor@us.ibm.com

J. Barry Lombardini: Editor 3507 41st Street Lubbock, Texas 79413 E-Mail: jbarry.lombardini@ttmc.ttuhsc.edu

The Southern Lepidopterists' Society is open to anyone with an interest in the Lepidoptera of the southern region of the United States. Membership dues are annual:

\$15.00
\$12.00
\$25.00
\$50.00

A newsletter, The News of the Southern Lepidopterists' Society is published four times annually.

Information about the Society may be obtained from the Membership Coordinator or the Society Website: www.southernlepsoc.org/

INDEX

	\mathbf{n}	12	α
	21		•
		-	~

1.	Feralia major J.B. Smith in Southeast Louisiana by
	Vernon Antoine Brou Jr
2.	Calycopis isobeon (Dusty-Blue Hairstreak) Attracted
	to Blacklights
3.	Hooked at Davis Cove by Howard Grisham
4.	The Noctuidae Genus Mocis Hubner in Louisiana by
	Vernon Antoine Brou Jr
5.	Chemistry of the Sesiid Pheromones (Sex Attractants) by
	J. Barry Lombardini
6.	Report on Field Trip Meeting at Concan Terxas -
	May 21-23, 2004, (Color Inserts A and B)by
	J. Barry Lombardini41
7.	Rebuttal to Lepidoptera of Florida Review by
	John B. Heppner42
8.	The Leopard Moth, Ecpantheria scribonia (Stoll), (Arctiidae)
	in Louisiana by Vernon Antoine Brou Jr
9.	Phoberia Automaris Hubner in Louisiana by
	Vernon Antoine Brou Jr
0.	WING FLAPS by Terry Doyle
1.	Alfred Russel Wallace: A Capsule Biography by
	Charles H. Smith
2.	Brief Note from the Chairman by Robert Beiriger
3.	Fall Meeting of the Southern Lepidopterists' Society to be
	Held in Gainesville. September 17-19, 2004
4.	Reports of State Coordinators
100	



1

Southern Dogface [Zerene cesonia (Stoll)]; Buffalo Springs Lake nr. Lubbock, TX.



Salt Marsh Moth [Estigmene acrea (Drury)] with clusters of eggs; Caprock Canyons State Park, nr. Quitaque, TX.

HOOKED AT DAVIS COVE BY HOWARD GRISHAM

Wednesday, April 28, 2004, the bullets and fires at the office were flying by and burning in usual fashion. Clients were happy; adversaries were unhappy—I was doing my job properly. However, two hot contracts needed reviewing, and there were five and seven matters set for various court hearings on Thursday the 29th and Friday the 30th, respectively. Trouble was, the end of April/first of May is prime season for the front-end of the *Poanes hobomok monofascies* flight here in north Alabama, and the weather geeks on all three local TV stations were screaming rain for the whole weekend. The only sunny day, per the geeks, would be April 29.

What to do? There was only one sane choice—I took the day off and went bug hunting. The practice of law would have to wait and properly assume its posture of taking a back seat to this hobby I find myself addicted to. My associate would cover the court hearings; my staff would have to handle Thursday's bullets and fires as best they could.

I arrived at the Davis Cove area at the foot of Bingham Mountain near Hollytree in Jackson County, Alabama, around 8:30 am. A slow meandering was commenced throughout the terrain, through the profuse *Salvia lyrata*, which seems to be the locally preferred nectar source for the *hobomoks*. Dozens and dozens of pesky male *Poanes zabulons* were patrolling the whole area, harassing the other, more peaceful, butterflies and day-flying moths, even taking on the *Erynnis* remnants from earlier this spring. Three nice *Amblyscirtes aesculapius* and several *hegon* were taken, as well as a good bag of whatever those blues are that come out just after the spring flight of *Celastrina ladon* (about twice the area size of the spring *ladon*—a few of which still were hanging around—and with almost solidly silvery-white ventral coloration). Ample quantities of the twenty-five or so commonly encountered "regulars" species were working the general area. Some interesting Hymenoptera and Diptera were taken, as well as a couple of "keeper" scarabs. Nothing out of the ordinary, except that by 11:30 am, only one fresh *monofascies* had been enveloped.

I packed up and headed northeast, to the nearby Skyline Wildlife Management Area, to see what might be out and about other than turkey hunters. Butterflies appeared to be mostly in between flights. Nothing much going on at all, except for a pristine *Atrytonopsis hianna* being harassed by an *Erynnis juvenalis* with an attitude. Anyway, I grabbed the *hianna* and headed back to Davis Cove.

By early afternoon a few remnant *Pieris virginiensis* were fluttering about. I took a tattered *Lyceana phlaeas*. It's neat how several "northern" butterflies seem to find their way to north Alabama. Ample quantities of *Calycopis cecrops* and *Callophrys gryneus* were nectaring (near as I could tell) on Beaked Corn Salad (*Valerianella radiata*), an abundant succulent annual found along roadsides, woodland margins, fields and waste places in the April/May time frame. At 1:15 pm, I stepped into a corner of one of the fields and there it was! Mostly just a silhouette, but too big to be a *cecrops*; too large and light to be a *gryneus*. Nectaring on the *radiata*. Maybe a small *Parrhasius m-album*, but heck if it didn't flap its wings a time or two. A quick grab and look-see and, what an unanticipated surprise, an *Erora laeta*! A well-endowed female, substantially larger than the Kentucky and Vermont examples reposing in my reference collection.

Two more earnest hours of tramping through the wildflowers yielded no more *laeta*, although I did manage one more *monofascies*. The day was topped off at the cabin with a two inch ribeye steak grilled just right and a half bottle of red wine. I hadn't seen a single *Homo sapien* outside of a vehicle the whole trip. Perfect....

SLS WEBSITE

Members check out the SLS website (www.southernleps;oc.org/). Get your unknowns identified (no promise)!!!

VOLUME 26 NO.2 (2004), PG. 35

THE NOCTUIDAE GENUS *MOCIS* HUBNER IN LOUISIANA BY VERNON ANTOINE BROU JR.

In Louisiana, four species of *Mocis* Hubner (Fig. 1) occur as adults in considerable numbers much of the year. These same species are listed by Hodges (1983) for America north of Mexico. In Florida, these same four species were reported by Kimball (1965). Most recently, Heppner (2003) listed *Mocis cubana* Hampson as also occurring in the Florida Keys. Four species of *Mocis* are reported for Texas by Knudson & Bordelon (1999). Two species, *Mocis marcida* (Gn.) and *Mocis texana* (Morr.) appear to be resident species in Louisiana, while the smaller in size species: *Mocis latipes* (Gn.) and *Mocis disseverans* (Wlk.) appear to occur primarily as large fall migrations, peaking during October (Fig. 2c, 2d). Four species of *Mocis* (Fig. 1) were previously reported for Louisiana by Chapin and Callahan (1967) without illustration.



Fig. 1. Mocis of Louisiana: M. marcida, a. male, e. female, M. texana, b. male, f. female, M. latipes c. male, g. female, M. disseverans, d. male, h. female.

Mocis marcida is the most frequently encountered of the four species in Louisiana, occurring in all 12 months in what appears to be at least five annual broods (Fig. 2a), and *Mocis texana* appears to have at least three broods (Fig. 2b). *Mocis disseverans* is the least encountered of the four Louisiana species. A total of 5,668 specimens of *Mocis* were taken in this study.

Most of the species can be separated without difficulty when fresh. All the species can vary in color and maculation, and aberrants do occur. Both sexes of the four species display a tiny white orbicular spot on the forewing. Male *disseverans* display prominent dull orange tibial hairs, which are helpful in distinguishing it from the highly variably colored *latipes*, though females of these two are often difficult to differentiate.



Fig. 2. Adult Mocis specimens collected at sec.24T6SR12E, 4.2 mi. NE Abita Springs, Louisiana: a. M. marcida, b. M. texana, c. M. latipes, d. M. Disseverans.



Fig. 3. Parishes in which *Mocis* species have been collected: a. *M. marcida*, b. *M. texana*, c. *M. latipes*, d. M. disseverans.

Species of *Mocis* are grass feeders (Gramineae), including economically important ones as sugar cane, corn and rice, all significant agricultural crops in Louisiana. Other reported food plants include crab grass, beans, and turnips [Covell (1984)], though some of these require confirmation. The locality distribution records for *Mocis* are depicted in Fig. 3.

Literature Cited

Chapin, J.B. and Philip S. Callahan 1967. A list of the Noctuidae (Lepidoptera, Insecta) collected in the vicinity of Baton Rouge, Louisiana, Proc. La. Acad. Sci. 30: 39-48.

Covell, Jr., C.V. 1984. A Field Guide to the Moths of Eastern North America. The Peterson Field Guide Series No. 30. Houghton Mifflin Co., Boston. xv + 469pp., 64 plates.

Heppner, J.B. 2003. Arthropods of Florida and neighboring land areas, vol. 17: *Lepidoptera of Florida*, Div. Plant Industry, Fla. Dept. Agr. and Consum. Serv., Gainesville. x + 670pp., 55 plates.

Hodges, R.W. et al. 1983. Checklist of the Lepidoptera of America North of Mexico. E.W. Classey Ltd. and The Wedge Entomol. Res. Found., Cambridge: Univ. Press. xxiv + 284 pp.

Kimball, C. P. 1965, Arthropods of Florida and neighboring land areas, vol. 1: *Lepidoptera of Florida*, Div. Plant Industry, Fla. Dept. Agr., Gainesville. v + 363pp., 26 plates.

Knudson, E. and C. Bordelon 1999. Texas Lepidoptera Survey, Checklist of the Lepidoptera of Texas, 2000 edit.

(Vernon Antoine Brou Jr., 74320 Jack Loyd Road, Abita Springs, Louisiana, 70420 email: vabrou@bellsouth.net)

CONGRATULATIONS TO JAMES ADAMS

Congratulations to James Adams for his recent election to the Presidency of the Lepidopterists' Society. A rival that it is, *i.e.*, the Lepidopterists' Society, we will not hold this against James. James with his encyclopedic knowledge of the butterflies and moths of our southern region deserves much credit for his effort and enthusiasm in promoting the study of lepidoptera. Again congratulations, James, on your election and good luck in this coming year as President of the Lepidopterists' Society. [Just remember you owe me an article for the SL News - The Editor.]

DEFINITIONS:

Aestivation (Estivation) – dormancy during a hot, dry season; passing the summer in a dormant state; opposed to hibernation which is dormancy in the winter.

Diapause – a period of inactivity and reduced physiological function induced by environmental factors; a period of delayed development or growth accompanied by reduced metabolism and inactivity.

Montane - mountainous regions between foothills and subalpine areas.

Savanna, Savannah – a treeless plain or a grassland characterized by scattered trees and shrubs, especially in tropical or subtropical regions having seasonal rains.

APPEAL TO MY FELLOW MEMBERS

Fellow members, most of you are out in the field collecting presently and there must be something of interest that you are finding. Please send me a report, some pictures (any pictures) of specimens - of colleagues. How about a book report. How about an article on some historical figure who made a significant contribution to the study of lepidoptera. Any butterfly/moth jokes out there? Obviously, your editor needs material for the Newsletter.

VOLUME 26 NO.2 (2004), PG. 38

CHEMISTRY OF THE SESIID PHEROMONES (SEX ATTRACTANTS) BY J. BARRY LOMBARDINI

Background:

Clearwing borers, also known as clearwing moths, are a group of moths in the family Sesiidae whose tunneling larvae have been known to damage and/or destroy many different types of trees and vines in the United States. The larvae are borers finding a seasonal home in the roots, limbs or trunks of shrubs and trees or sometimes forming galls on trees and vines. Depending upon the extent of the infestation the host plant can survive if only minor damage due to the larval tunneling, be weakened so that other endemic stresses such as drought or disease exacerbate the debilitative process and cause the host plant to be stunted, or in extreme circumstances cause the outright death of the host plant.

These insects are unique in that they mimic wasps and bees in their appearance and when observing them for the first time one is amazed at the resemblance that they have to their stinging, distant relatives. However, collecting these clearwing moths has been a problem in the past in that they are not easily noticed in the field and thus collections usually had few specimens of only very few species. In the 1970ties, pheromones or sex attractants produced by the females of certain of these Sesiid moths were first identified and synthesized. Since the use of these pheromones in traps the males of many of the 100 known species of clearwing moths found in the United States can now be monitored for both pest control and taxonomic purposes.

Chemistry:																				
		Η	Н		Η	Η	Н	Н	Η	Η	Η	Η	Η	Н	H	Н	Η	Н	Η	
Structure:	R -	C-	C=	= C -	C -	C-	·C·	· C ·	·C·	C -	· C ·	·C·	· C ·	C	= C	- C -	·C·	· C ·	С-Н	
		Η		Н	Η	Η	Η	Η	Η	Η	Η	Η	Η			Η	Η	Η	Н	
Carbon #:		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	

NOTE:

The carbon chain has 18 carbons and two double bonds, therefore named "octadecadien" ("octadeca" = 18; "dien" = 2 unsaturations or 2 double bonds.)

2) As stated above there are two double bonds within the 18 carbon chain:

a) One double bond is *always* at carbon #13.

- b) The second double bond can be either at carbon #2 (as in above example) or at carbon #3.
- The hydrogens on the double bonds can either be on opposite sides (as on carbon #2) or on the same side (as on carbon #13).

a) If the hydrogens are on opposite sides of the double bond they are referred to as "E" from the German word "Entgegen" meaning opposite.

b) If the hydrogens are on the same side of the double bond they are designated as "Z" from the word "Zusammen" meaning together or side-by-side.

4) "R" = An alcohol moiety (HO -) is designated by "OH" (if an alcohol moiety is present it can only be at carbon #1)

5) "**R**" = An acetate moiety ($H_3C - C - O -$) is designated by "A" (if an acetate moiety is present it can only be at carbon #1)

6) It appears from perusing the Sesiid pheromone literature that the hydrogens on carbon #13 are always in the "Z" configuration.

Example 1:

Name:

E,Z 3,13-octadecadien-1-ol alcohol

("1" is the carbon #1 position which in this example contains an alcohol moiety.)

can also be abbreviated as: E,Z 3,13 ODDOH ["ODDOH" = octadecadien-1-ol, "OH" = alcohol]

or simpler as: E,Z-ODDOH

or another convention as: EZOH 3,13

or the shortest possible as: EZOH

Note: Sometimes the chemical naming of the pheromones are written in the most abbreviated form such as **"EZOH"** in the above example because one of the double bonds is always at carbon position #13 there is no need to designate its position (although many authors do). However, it is a bit confusing if the double bond at either the #2 or #3 carbon position is not designated. So if one observes in the literature **"EZ-ODDOH"** or **"EZOH"** you may not know the carbon position for the **"E"** designation. The double bond could be either at the #2 or #3 carbon position. However, some authors clarify this problem a bit by stating that carbon **"#3"** configuration applies unless stated differently. The abbreviation **"EZ-ODDOH" or "EZOH"** implies that the double bonds are at the carbon **"#13" and "#13"** positions. If the double bond is at the carbon #2 position then the author would add this description in the nomenclature (*e.g.* **E,Z 2,13 ODDOH** or **EZOH 2,13**).

Example 2:

0	H	Η	H	H	H	H	H	H	Н	H	Η	Η	H	H	Η	Η	H	Н	
H ₃ C - Ö - O -	· C ·	- C -	C =	- C -	С-	C	- C	- C ·	- C -	· C ·	·C·	· C ·	· C =	= C -	C ·	·C·	· C ·	- C - H	ł
	Н	Н			Η	Η	Η	Η	Н	Η	Η	Н			Н	Η	Η	Η	

Name:

Z,Z 3,13-octadecadien-1-ol acetate

(Acetate moiety is positioned at the #1 carbon atom.)

Z,Z 3,13 ODDA

["ODDA" = octadecadien-1-ol, "A" = acetate]

Z,Z-ODDA

ZZA

VOLUME 26 NO.2 (2004), PG. 40

Thus, with a chemical structure with two double bonds, one of which is fixed at carbon position #13 (and always in the "Z" configuration), and the second variable between carbon position #2 and #3, and the additional parameter of the chemical being either an **acetate** (A) or an **alcohol** (OH) there are 8 different possibilities for the chemical structure:

Z,Z 2,13 ODDA*	Z,Z 2,13 ODDOH*
Z,Z 3,13 ODDA	Z,Z 3,13 ODDOH
E,Z 2,13 ODDA	E,Z 2,13 ODDOH
E,Z 3,13 ODDA	E,Z 3,13 ODDOH

*In checking the literature for the known pheromones of the Sesiid moths, Z,Z 2,13 ODDA and Z,Z 2,13 ODDOH do not appear to be used by these moths. This then leaves only 6 possible combinations of pheromones. [However, nothing is as simple as it seems. There is at least one structural modification of these 18 carbon chain molecules in which one known pheromone has only 1 double bond: Z 13-octadeceryl acetate or Z 13-ODA. Z 13-ODA is an attractant used in combination with EZA 2,13 (94:4) for the Oak clearwing borer (*Paranthrene asilipennis*).]

Different species of Sessids are attracted to these chemical pheromones either singly or in mixtures in different ratios of the various chemicals. For example:

Species:	Attracted by pheromone (ratio):
Synanthedon scitula	Z,Z-ODDA
Synanthedon dominicki	E,Z 2,13 ODDA
Paranthrene dollii	ZZ-ODDOH / EZ-ODDOH (1:1)
Melittia cucurbitae	E,Z 2,13 ODDA / Z,Z 3,13 ODDA (99:1
Sannina uroceriformis	E,Z-ODDOH / Z,Z-ODDA (9:1)

The next observation that the reader should be aware of is that there is a lot of overlap of pheromones for different species. For example, many Sesiids are attracted to Z,Z-ODDA, a few of which are the following:

Sesia tibialis	Z,Z-ODDA
Synanthedon scitula	Z,Z-ODDA
Synanthedon culiciformis	Z,Z-ODDA
Carmenta albociliata	Z,Z-ODDA

There are at least 25 different Sesiid species that are attracted to Z,Z-ODDA. Five or more species are attracted to EZ-ODDA; at least 8 species are attracted to E,Z 2,13 ODDA; and, three species are attracted to ZZ-ODDOH. Many of these species are in the same genus but a particular pheromone may also cross genera. This brings up an interesting question as to the potential confusion if one specific pheromone (sex attractant) attracts more than one species of males in nature. This appears to be a formula for chaos. However, chaos appears not to occur - everybody finds the correct partner. Thus, there must be something that is missing in this picture. Nature is smarter than this!

Literature

Taft, William H., Smitley, Dave and Snow, J. Wendell. (1991) A Guide to the Clearwing Borers (Sesiidae) of the North Central United States, North Central Regional Publication No. 394. Michigan State university, East Lansing, Michigan.

Winter, William D. Jr. (2000) Basic Techniques for Observing and Studying Moths & Butterflies, Memoirs of the Lepidopterists' Society No. 5, Natural History Museum, 900 Exposition Blvd., Los Angeles, CA 90007-4057.

VOLUME 26 NO.2 (2004), PG. 41

REPORT ON FIELD TRIP MEETING AT CONCAN, TEXAS MAY 21, 22 AND 23, 2004 BY J. BARRY LOMBARDINI

A small but highly enthusiastic group of butterfly/moth collectors met in Concan, Texas, on May 21-23, 2004.



Leila Lombardini

Neal's Vacation Lodge was the meeting place which is on the beautiful Rio Frio in the Texas Hill Country. Weather was overcast in the mornings but the sun came out in the afternoons (hot and humid). The group met in Terry Doyle's and Greg Muise's cabin on Saturday night for some hours of conversation and moth collecting at a blacklight and a Mercury vapor light.

Society members who showed up were the following: Terry Doyle, Ed knudson, Charles Bordelon, Michael Quinn, Barry Lombardini, and Jeff Slotten. All Texans with the exception of Jeff, a Floridian (that's a long, long drive). Greg Muise was also present and while he is not a member of the Society he does have an avid interest in the butterflies and moths of the Texas Hill



Rio Frio at Neal's Vacation Lodges



One of the Cabins at Neal's Resort

country. (Howard Grisham, Michael Lockwood, and Michael Lefort were in the vicinity.)

Terry mentions a few things of interest that were collected during this weekend at Concan and the neighboring vicinity: Manduca rustica, an abundant sphingid moth at sheets, Ascia monuste, Concan, county record, and Catocala micronympha. Ed has a more complete list of what was flying this weekend in the State Coordinator's Report for Texas (pg. 65).

Please see Color Inserts A and B for some additional scenery of this area of the Texas Hill Country and the various individuals who participated.

Tubing on the Rio Frio

REBUTTAL TO LEPIDOPTERA OF FLORIDA REVIEW BY JOHN B. HEPPNER

I do not much like rebuttals to book reviews, but sometimes one does need to correct misconstrued facts, so I offer some comments on what was noted in the recent book review by Finkelstein (*SLN*, 26:13-16, 2004), for the new catalog of Florida Lepidoptera (*Lepidoptera of Florida. Part 1: Introduction and Catalog*, Vol. 17, in Arthropods of Florida and Neighboring Land Areas, 2003). This new catalog was almost entirely completed by myself, and all the introductory section was my own work; the 6 collaborators only provided some of the records for the listings or hostplant data.

The review begins by asking if the new catalog is a final product, which by the end of the review claims it is not. It is only a catalog. Kimball's 1965 catalog (*The Lepidoptera of Florida: an Annotated Checklist*, Vol. 1, in the *Arthropods of Florida* series), is no final product either: it also is just a catalog. The reviewer complains about the plates, yet about 90% of the species illustrated can actually be identified even with the poor reproduction quality of the images; the reviewer merely emphasizes those 10% that are hard to see from the plates. Perhaps a future revised edition of the catalog will have the plates reproduced better.

The reviewer goes on to complain about the hostplant index, where only catalog numbers are listed instead of the full name of each lepidopteran: the reviewer fails to mention that Kimball (1965) had it about the same, but with page numbers for each host reference (even more cumbersome, since one had to search each page to find what lepidopteran was actually referred to. The next part in the series, the cross-index to hostplants will list the lepidopteran species names under each plant name, along with the method of feeding (leaf feeder, leafminer, borer, *etc.*). This second part already is virtually finished and should be out within a year. Future parts will be detailed species notes and greatly enlarged color images for each species, along with complete collection records from specimen label data at the Florida State Collection of Arthropods and other museums: this will take longer but will eventually complete the series. Is the catalog complete? Yes, as a catalog it is complete in itself (the upcoming Part 2, the hostplant cross-index, merely helps the user find what is feeding on what plants more easily). Is the series complete?: not yet.

My hope is that the overall rather negative tone of the review by Finkelstein will not keep potential users away from the catalog. It is 40 years advanced from what Kimball could put together and much more logically organized for the user to make use of. Yes, Kimball's book sold for \$5 from the State of Florida, while the new catalog is \$45, but the new catalog is nearly twice as large (670 pp) and the dollar has greatly decreased in value over the past 40 years by about two-thirds at least. Remember 32-cent-per-gallon gasoline? The only change for a future new edition (hopefully besides the plates), will be the use of updated catalog numbers from a new Nearctic catalog, plus, of course, the correction of errors. I am glad to have notes on errors in the catalog listings, and would encourage users to send me any that they may find, so the next edition will be even better. Internet contact: heppnej@doacs.state.fl.us.

HOUSEKEEPING

If there are any problems with the Newsletter - missing color inserts, faulty pages - please notify Jeff Slotten and he will send you the missing or corrected pages.

If there are typos or incorrect information in the Newsletter please send me [The Editor] a note and I will address the error and make a correction in the next issue. I try to be very careful in proofing the News but I am sure that I miss mistakes occasionally (hopefully only occasionally).

If the dues notification year on your address label is incorrect please notify Jeff Slotten.

VOLUME 26 NO.2 (2004), PG. 43

THE LEOPARD MOTH, ECPANTHERIA SCRIBONIA (STOLL), (ARCTIIDAE) IN LOUISIANA BY VERNON ANTOINE BROU JR.

The well recognized and common Leopard Moth, *Ecpantheria scribonia* (Stoll) (Fig. 1), occurs over much of the eastern United States. Covell (1984) states *scribonia* is common southward, occurring April through September. In Louisiana, most of my records are from the southeast portion of the state (Fig. 2), though this is surely due to my poor record keeping and less surveillance in the western portion of the state. *E. scribonia* appears to have two annual broods peaking around early May and mid-August (Fig. 3).

The larvae are commonly encountered as singletons feeding on a wide variety of usually low plants as well as over wintering as full grown larvae under loose tree bark or any available hiding place.

The entire surface of most pinned specimens stored in collections become greasy, especially so in males.



Fig. 1. Ecpantheria scribonia (Stoll) adults a. male, b. female.



Fig. 2. Parish records by this author.



Fig. 3. Adult *Ecpantheria scribonia* collected at sec.24T6SR12E, 4.2 miles NE Abita Springs, Louisiana. n = 1130.

Literature Cited

Covell, Jr., C.V. 1984. A Field Guide to the Moths of Eastern North America. The Peterson Field Guide Series No. 30. Houghton Mifflin Co., Boston. xv + 469pp., 64 plates.

(Vernon Antoine Brou Jr., 74320 Jack Loyd Road, Abita Springs, Louisiana 70420 e-mail: vabrou@bellsouth.net)

VOLUME 26 NO.2 (2004), PG. 44

PHOBERIA AUTOMARIS HUBNER IN LOUISIANA BY VERNON ANTOINE BROU JR.

The medium-sized noctuid moth *Phoberia automaris* Hubner (Fig. 1) is one of the earlier spring species on the wing in Louisiana. The color of this moth is numerous, varying shades of brown, dark chestnut to light tan



Fig. 1. Phoberia automaris Hubner

suffusion on forewings with a small black or white basal line, or black basal line distally bordered by whitish line, black or white antemedial line and post medial line. The median forewing line is diffuse and there is an elongated reniform spot. The hindwing is uniformly fuscous, or when worn, lighter brown near base and increasingly darker approaching outer margin. The thorax and abdomen are similar brown in color.

Covell (1984) states the range to be Massachusetts to Florida, west to east Kansas and Texas. In Louisiana, I have taken *automaris* in seven parishes, though it is certainly more widespread over the state (Fig. 2). Covell (1984) states *automaris* is common to abundant in oak forest late March to early May. I have found **automaris** to occur in Louisiana beginning in late January to the end of March, the single annual brood peaking in late February (Fig. 3).

Heppner (2003) states **automaris** occurs January to April in Florida and oaks (*Quercus* species) as the larval foodplant.







Fig. 3. *Phoberia automaris* capatured at sec.24T6SR12E, 4.2 mi NE Abita Springs, Louisiana. n = 1294.

Literature Cited

Covell, Jr., C.V. 1984. A Field Guide to the Moths of Eastern North America. The Peterson Field Guide Series No. 30 Houghton Mifflin Co., Boston. xv + 469 pp., 64 plates.

Heppner, J.B. 2003. Arthropods of Florida and neighboring land areas, vol. 17: Lepidoptera of Florida, Div. Plant Industry, Fla. Dept. Agr. and Consum. Serv., Gainesville. x + 670pp., 55 plates.

(Vernon Antoine Brou Jr., 74320 Jack Loyd Road, Abita Springs, Louisiana 70420; e-mail: vabrou@bellsouth.net)

WING FLAPS

TERRY DOYLE

Welcome to the in-print discussion forum of the Southern Lepidopterists' Society. This will be the place to send your questions and/or comments on any subject related to lepidoptera. Including subjects regarding life history, old records and activities in your area. Throw in some impedimentia about our society and other societies and associations. There will be no sacred larva, er, cows. We will pull no wing strokes, er, punches here.

How about some flapdoodle (look that up in your Funk & Wagnall), such as, wouldn't it be great if we had a NAMA for moth watchers. Where can you get the best deal on night-vision binoculars? It could happen. Or is it true that Hadeninae are required to apply Rogaine to their eyes as a determination aid for taxonomists?

Every once in awhile your fearless flapinator will take off on a flight of judgmental journalism. Like what does it take to get verification of a record submitted to the USGS checklist? Is it a photo, a sight record, a voucher specimen or a notarized letter from your motherin-law. It sure won't be a record from the SL News state report. We are not recognized as an official source.

We should bring Oklahoma into the Society; it's not any farther north than Arkansas. (Where did that come from?)

How about some digital photography tricks? James Adams shared one with me for digital or slr camera application. Just take it outside, baby! Best lighting in the world, no battery failure and no shadows. Just bounce the light off the side of your house, set the exposure and bingo. How about finding a nearby county/ies in your state with the lowest number of butterfly or moth records and do a Check USGS site for survey. county checklists, it's easy as pie. Be the envy of all the kids in your block when you swamp your state coordinator with that big honking report.

OK, flappers, we got a little problem with marketing in this outfit. Brand recognition to be exact. I could only find two field guides that listed our sterling society. Look 'em up. First one in with the correct names gets the first Golden Frass Award. We just don't get any respect. How long do we have to be in business? Twentysix years ain't good enough. And by the way, we need to put that date back on the masthead, really inyour-face-big.

That's enough for now, I think you get the idea. Don't want to use up all the "A" stuff so soon. If you have any other subjects to address, fire away. Keep your notes short and sweet for now. Let's start thinking outside the pupa. I think I hear the sound of a paradigm shifting.

By the way and contrary to some reports, the Southern Lepidopterists' Society is alive and well with a solid core membership of pro-active lepidopterists. We will continue to aspire to the words describing the society on the front page of this publication; interest, knowledge and understanding of the lepidoptera of the southern United States.

Write me, e-mail me.

(Terry Doyle, 13310 Bar C Dr., San Antonio TX 78253, tdoyle3@aol.com)

NOTE

<u>COLOR INSERTS A AND B</u> accompany the report on the field trip to Concan, Texas, May 21-23, 2004 (page 41).

ALFRED RUSSEL WALLACE: A CAPSULE BIOGRAPHY BY CHARLES H. SMITH

The Origins of an Evolutionist (1823-1848) Travels in the Amazon and Malay Archipelago (1848-1862) Wallace the Evolving Polymath (1862-1880) Wallace the Social Radical and "Grand Old Man of Science" (1880-1913) Wallace's Accomplishments: A Summary List Biographical Sources

<u>Note by Dr. Smith:</u> The literature cited is identified in the 'Writings on Wallace' section at this site; the "S" numbers given in the text refer to the item entry numbers in the 'Wallace Bibliography' section. To link directly to this page, connect with: http://www.wku.edu/~smithch/wallace/BIOG.htm

The Origins of an Evolutionist (1823-1848)

Alfred Russel Wallace (1823-1913), English naturalist, evolutionist, geographer, anthropologist, and social critic and theorist, was born 8 January 1823 at Usk, Gwent (formerly, and at the time of Wallace's birth, Monmouthshire). He was the third of four sons and eighth of nine children of Thomas Vere Wallace and Mary Anne Greenell, a middle-class English couple of modest means. The older Wallace was of Scottish descent (reputedly, of a line leading back to the famous William Wallace of medieval times); the Greenells were a relatively unremarkable but respectable English family that had lived in the area for generations. Thomas Wallace had trained for the law (and actually was sworn in as an attorney in 1792) but never practiced, income from inherited property securing him a life of leisure for the first fifteen years of his adulthood. With his marriage in 1807 things quickly changed, however, and he was forced into the first of what would turn out to be a long series of relatively

unsuccessful ventures, including the publication of a literary magazine.

Young Alfred's childhood was a happy one, but at times difficult for lack of money. Four of his five older sisters did not live beyond the age of twenty-two, and Wallace himself was not always in the best of health. He found the grammar school he attended in Hertford rather tedious, but for a time was privy to plenty of good reading materials, his father being a town librarian for some years. About 1835 the elder Wallace was swindled out of his remaining property and the family fell on really hard times; young Wallace was forced to withdraw from school around Christmas 1836 and was sent to London to room with his older brother John. The ensuing several month experience was critical to his future intellectual development, as there he first came into contact with supporters of the utopian socialist Robert Owen. In his autobiography My Life (S729) he recollects that he even once heard Owen himself speak; from that point on he would describe himself in disciple terms.

By mid 1837 he had left London to join the eldest brother, William, in Bedfordshire. William owned a surveying business, and Wallace was to learn the trade. In 1839 he was temporarily apprenticed to a watchmaker, but by the end of the year he was again working with William, now based in Hereford. Over the next several years he picked up a number of trades-related skills and knowledge, particularly in drafting and map-making, geometry and trigonometry, building design and construction, mechanics, and agricultural chemistry. Moreover, he discovered that he really enjoyed the outdoor work involved in surveying. Soon he was starting to take an interest in the natural history of his surroundings, especially its botany, geology, and astronomy. While working in the area of the Hereford town of Kington in 1841 he became associated with the newly-formed Mechanic's Institution there; some months later, after moving over to the Welsh town of Neath, he began attending lectures given by the members of that area's various scientific societies. He also involved himself with the Neath



1) Wallace in 1848, age 25 (Sources cited: C.H. Smith's webpage and A.R. Wallace's book *My Life*).

Mechanics Institute, eventually giving his own lectures there on various technical and natural history subjects. The early 1840s also witnessed his first writing efforts: an essay (S1a) on the disposition of mechanics institutes written about 1841 found its way into a history of Kington published in 1845; two of his other essays from this early period (S1 and S623) are discussed in his 1905 autobiography *My Life* (S729).

In late 1843 a slow work period forced William Wallace to let his brother go. Alfred decided to apply for an open position at the Collegiate School in Leicester, where he was hired on as a master to teach drafting, surveying, English, and arithmetic. Now commenced another period central to his future path. Collegiate School had a good library, and there he was able to find and digest several important works on natural history and systematics; moreover, sometime during the year 1844 he made the acquaintance of another young amateur naturalist, Henry Walter Bates. Bates, though two years younger than Wallace, was already an accomplished entomologist, and his collections and collecting activities soon captured Wallace's interest. Around the same time Wallace saw his first demonstration of the practice of mesmerism, then dismissed by most as illusion or trickery. On investigating, however, he found he could personally reproduce many of the effects he had seen exhibited on stage, and learned his "first great lesson in the inquiry into these obscure fields of knowledge, never to accept the disbelief of great men, or their accusations of imposture or of imbecility, as of any weight when opposed to the repeated observation of facts by other men admittedly sane and honest" (S478).

In February of 1845 his brother William died unexpectedly and Wallace quit his teaching job at Leicester to return to surveying, now going through a boom period. But he soon found that running the business, even with the help of his brother John, involved responsibilities (such as fee collection) that he hated. He still had enough spare time, however, to continue with his natural history-related activities, and was even made a curator of the Neath Philosophical and Literary Institute's museum. He also kept up a correspondence with his friend Bates. A new book by William H. Edwards entitled A Voyage Up the River Amazon suggested a way out of his situation: he would turn professional and launch a self-sustaining natural history collecting expedition to South America. Bates was enlisted (undoubtedly with little effort), and the two young men (at the time Wallace was 25 and Bates 23) left for Pará (now called Belém), at the mouth of the Amazon, on 25 April 1848.

Travels in the Amazon and Malay Archipelago (1848-1862)

On 28 May 1848 Wallace and Bates

VOLUME 26 NO.2 (2004), PG. 47

disembarked at Pará and began to organize their operations. At first they worked as a team, but in March 1850 or perhaps as much as eighteen months earlier they split up (for reasons that have never been clarified). Wallace centered his activities in the middle Amazon and Rio Negro regions; Bates would remain in Amazonian South America eleven years, securing his permanent reputation as a leading naturalist and entomologist, and contributing significantly to the early development of the theory of natural selection through his elucidation of the concept of mimetic resemblance--"Batesian mimicry"--and various writings on biogeography. Wallace managed to ascend the Rio Negro system further than anyone else had to that point, and drafted a map of the Rio Negro region that proved accurate enough to become the standard for many years (S11).

Apart from playing the role of collector and explorer, Wallace had an overriding reason for coming to the Amazon: to investigate the causes of organic evolution. His contacts with the Owenists had left him with an early interest in social/societal evolution, an interest that had extended itself in the direction of natural science with his mid-1840s readings of two crucial works: Charles Lyell's Principles of Geology, and Robert Chambers's Vestiges of the Natural History of Creation. Lyell's work had become the bible of uniformitarianism, and instilled in Wallace an appreciation of how long-term change could be effected through the operation of slow, ongoing processes. Vestiges was an early, popular, effort to examine the notion of biological evolution; it was a bit short on its appreciation of mechanism but argued pursuasively against both Creationism and Lamarckism. Wallace was apparently an instant convert to the feature arguments of



2) Wallace in 1853, age 30 (Sources cited: C.H. Smith's webpage and A.R. Wallace's book *My Life*).

each work, and very quickly recognized how he might go about demonstrating that evolution did in fact take place: by tracing out, over space. and time the geographical/geological records of individual phylogenies. He soon focused on two particular elements of this study: (1) the way geography limited or facilitated the extension of species range, and (2) how ecological station seemed to influence the shaping of adaptations more than did closeness of affinity with other forms. His investigation of these subjects included efforts to come to grips with the region's ornithology, entomology, primatology, ichthyology, botany, and physical geography, but in the end he was unable to come to any conclusion about the actual mechanism of evolutionary change. He also spent much time studying the ways of the native peoples he worked among, including collecting vocabularies of many of their languages (S714).

By early 1852 Wallace was in ill health and in no condition to proceed any further. He decided to quit South America, and began the long trip back down the Rio Negro and Amazon to Pará. When he finally reached the town on the 2nd of July, he found that his younger brother Herbert had died. Herbert had been working in the area since 1849, but in 1851 tried to return to England from Pará, where he caught yellow fever. Moreover, and further to Wallace's dismay, most of the collections from the preceding two years he had been forwarding down the Amazon had been delayed at the dock at Barra do Rio Negro (Manaus) through a misunderstanding; he would therefore have to secure passage for these as well as himself. Within a few days he had been successful in so doing, and soon set out for England. Unfortunately, on the 6th of August the brig on which he was sailing caught fire and sank, taking almost all of his possessions-including some live animals--along with it. For ten days Wallace and his comrades struggled to survive in a pair of badly leaking lifeboats, then were sighted and picked up by a passing cargo ship also making its way back to England. As luck would have it this vessel was also old and slow, and itself nearly foundered when hit by a series of storms. In all, Wallace's ocean crossing took eighty days.

When Wallace stepped back on English soil on 1 October 1852, he was faced with some decisions. His collections had been insured, but only to an extent buying him some time. He was now twenty-nine and reasonably well-known as a travelling naturalist, but he had not been able to come up with the key to the mystery of organic change. Further, he now had no collections he could study at his leisure that might help him do so. For eighteen months his activities were mixed: a

VOLUME 26 NO.2 (2004), PG. 48

vacation in Switzerland, attending professional meetings and delivering papers, and, finally, the production of two books: *Palm Trees of the Amazon and Their Uses* (S713) and *A Narrative of Travels on the Amazon and Rio Negro* (S714). These made a slight but generally positive impression; the first was an ethnobotanical study based in part on drawings he had managed to save from the ship's fire; the second, a pleasant but not terribly profound account of his four years' work and travels.

With no other prospects immediately apparent, Wallace decided to carry on with his collecting activities. He chose the Indonesian Archipelago for his next base of operations, using his record of accomplishments to that point to secure a grant from the Royal Geographical Society covering his passage to what was referred to in those days as "the Malay Archipelago." He arrived in Singapore on 20 April 1854, to begin what would turn out to be the defining period of his life.

Wallace's name is now inextricably linked with his travels in the Indonesian region. He spent nearly eight full years there; during that period he undertook about seventy different expeditions resulting in a combined total of around 14,000 miles of travel. He visited every important island in the archipelago at least once, and several on multiple occasions. His collecting efforts produced the astonishing total of 125,660 specimens, including more than a thousand species new to science. The volume he later wrote describing his work and experiences there, The Malay Archipelago (S715), is the most celebrated of all writings on Indonesia, and ranks with a small handful of other works as one of the nineteenth century's best scientific travel books. Highlights

of his adventures there include his study and capture of birds-of-paradise and orangutans, his many dealings with native peoples, and his residence on New Guinea (he was one of the very first Europeans to live there for any extended period).

Beyond his travel and collecting activities, Wallace's time in the Malay Archipelago was marked, of course, by the 1858 event that would assure his place in history. Three years earlier he had still been cogitating on the causes of organic evolution when an article by another naturalist prompted him to write and publish the essay 'On the Law Which Has Regulated the Introduction of New Species' (S20), a theoretical work that all but stated outright Wallace's belief in evolution. The paper was seen by Lyell, who thought highly of it and brought it to Darwin's attention. Darwin, however, took relatively little notice.

Now that he had a provisional model of the relation of biogeography to organic change, Wallace quickly applied the related concepts in two further studies, published in 1856 and 1857 (S26 & S38). In February of 1858, while suffering from an attack of malaria in the Moluccas (it is not fully certain which island he was actually on, though either Gilolo or Ternate seems the likely candidate), Wallace suddenly, and rather unexpectedly, connected the ideas of Thomas Malthus on the limits to population growth to a mechanism that might ensure long-term organic change. This was the concept of the "survival of the fittest," in which those individual organisms that are adapted to their local best surroundings are seen to have a better chance of surviving, and thus of differentially passing along their traits to progeny. Excited over his discovery, Wallace penned an essay on the subject as soon as he was well enough to do so, and sent it off to Darwin. He had begun a correspondence with Darwin two years earlier and knew that he was generally interested in "the species question"; perhaps Darwin would be kind enough to bring the work, titled 'On the Tendency of Varieties to Depart Indefinitely From the Original Type,' (S43) to the attention of Lyell? Darwin was in fact willing to do so, but not for any reasons Wallace had anticipated. Darwin, as the now well-known story goes, had been entertaining very similar ideas for going on twenty years, and now a threat to his priority on the subject loomed. He contacted Lyell to plead for advice on how to meet what just about anyone would have to admit was a very awkward situation. Lyell and Joseph Hooker, a prominent botanist and another of Darwin's close friends, decided to present Wallace's essay, along with some unpublished fragments from Darwin's writings on the subject, to the next meeting of the Linnean Society. This took place on 1 July 1858, without obtaining Wallace's permission first (he was contacted only after the fact).

Whatever one thinks about Wallace's treatment in this matter, the events of summer 1858 did ensure that the world wouldn't have to wait any longer for its introduction to the concept of natural selection. Darwin had been working on a much larger tome on the subject that was still many years away from completion (and in fact never was completed); Wallace's bombshell had the immediate effect of forcing him to get together a more compact, readable, and, ultimately, probably more successful work. On the Origin of Species was published less than eighteen months later, in November of 1859. And, although Darwin would overshadow Wallace from

VOLUME 26 NO.2 (2004), PG. 49

that point on, Wallace's role in the affair was well enough known to insiders, at least, to ensure his future entry into the highest ranks of scientific dialogue. It should in all fairness to Darwin be noted that Wallace took full advantage of this opportunity, an opportunity he might not otherwise have received.

Wallace's discovery of natural selection occurred almost at the midpoint of his stay in the Malay Archipelago. He was to remain there four more years, continuing his agenda of systematically exploring and recording the circumstances of its faunas, floras, and peoples. By the end of his trip (and for the rest of his life) he was known as the greatest living authority on the region. He was especially known for his studies on its zoogeography, including his discovery and description of the faunal discontinuity that now bears his name. "Wallace's Line," extending between the islands of Bali and Lombok and Borneo and Sulawesi, marks the limits of eastern extent of many Asian animal forms and, conversely, the limits of western extent of many Australasian forms.

Wallace the Evolving Polymath (1862-1880)

Wallace left the Malay Archipelago in February of 1862 and returned to England on 1 April. His collecting activities had earned him a sizable nest egg with which he hoped he could retire to a quiet life as a country gentleman. First, however, there was the matter of coming to grips with the implications of his vast personal collection of specimens. For the next three years he immersed himself in them, producing a string of systematic revisions (mainly of birds and insects) and several interpretative works. Over that period (to the end of 1865) he presented at least

sixteen papers at professional meetings, to the British Association, and Entomological, Z o o l o g i c a l, L i n n e a n, Anthropological and Geographical Societies. He soon met nearly every important English naturalist, and began to count many as friends.

In certain respects, the period 1862 through 1865 also represented a rather difficult time for Wallace. Eager to marry and settle down, he was rebuffed by one woman before wedding the twenty year old daughter of a botanist friend in 1866. Although one of their three children would die only a few years later, their marriage was by all accounts a happy one: his wife Annie proved an excellent companion, and was well enough educated and sufficiently interested to help him from time to time with his work. Further, both Wallaces loved gardening, and spent many hours together pursuing this The real crisis for recreation. Wallace in the years after his return to England revolved, however, around his relation to the theory of natural selection. Although Wallace was known as a co-originator of the natural selection concept, the premature reading of the Ternate essay and Darwin's subsequent publication of On the Origin of Species led everyone to believe he was a full supporter of Darwinian doctrines. Subsequent events would prove he was not.

We unfortunately do not know whether Wallace felt at the time that his 1858 model of natural selection could be extended to explain the origin and/or development of humankind's higher mental and moral qualities. Surprisingly, he wrote not another word about natural selection (at least, in the sense of doing more than just mentioning it) until late 1863 (the classic analysis 'Remarks on the Rev. S. Haughton's Paper on

the Bee's Cell, and on the Origin of Species,' S83). In 1864 he presented a milestone paper on the evolution of human races to the Anthropological Society: 'The Origin of Human Races and the Antiquity of Man Deduced From the Theory of "Natural Selection" (S93). In this work Wallace sought to reconcile the positions of the monogenists and polygenists on human origins through an application of the general Darwinian model. But by 1865 at the latest (and possibly going back many years), he had been experiencing some doubt as to whether materialistic models, including Darwinism, could account for humankind's higher attributes. He began investigating the philosophy and manifestations of spiritualism, most likely (in my opinion) in an effort to complete what he had started in 1858. The result was a wholly new evolutionary synthesis, one in which a material process (natural selection) was understood to rule at the biological level, while a spiritual one (as described through spiritualism) operated at the level of consciousness. This overall approach was later taken up by the theosophists (Madame Blavatsky et al.), who based most of their more esoteric teachings (including, for example, theories of cyclic reincarnation) on ancient religious and literary texts, but who also acknowledged a role for natural selection in producing a Darwinian kind of material phylogenesis. (Wallace himself, however, would never take much interest in theosophy, considering it much too abstruse.)

Wallace's conversion to spiritualism in the late 1860s took many of his colleagues by surprise (Hooker would later write in disbelief "that such a man should be a spiritualist is more wonderful than all the movements of all the plants"--a

VOLUME 26 NO.2 (2004), PG. 50

play on the title of a then-recently published work by Darwin). Wallace spent a few years urging them to look into the matter in more detail, but few followed his lead. He would remain a spiritualist the rest of his days, never recounting his belief, and publishing some one hundred writings on the subject. It is in fact generally thought that Wallace's



3) Wallace in 1869, age 46 (Sources cited: C.H. Smith's webpage and A.R. Wallace's book *My Life*).

thinking regarding the application of Darwinian concepts to the development of humankind's higher attributes changed around 1865 in response to this apparent new influence in his life; I personally feel this is a mis-reading of the situation, and that the apparent "change" in his position simply represented a solidification of a already-existing, but not yet formally stated, evolutionary model.

Whatever one believes about the influences on Wallace's thoughts during this period, there can be no disagreement as to the sudden broadening of his attention that followed soon thereafter. In 1865 he produced his first published writing on politics (S110); in 1866 writings on geodesy (S115 &

S116); in 1867 his first of many treatments of glacial features (S124); and in 1869 the first of several essays on museum organization (S143). Primarily, however, he was gaining recognition as one of Darwin's two main (the other being Thomas Huxley) "right-hand men." His most important 1860s works in that direction include S83, S93, S96, S121, S134, S136, S139, S140, S146, and S155. His reputation as a naturalist soon extended itself to the popular arena with the publication of his hugely successful The Malay Archipelago (S715) in early 1869, and the essay collection Contributions to the Theory of Natural Selection (S716) a year later.

In the decade that followed, Wallace published over 150 works, including essays, letters, reviews, book notices, and monographs. His scientific writings would focus on natural selection, geographical distribution, and glaciology, and include three classic books: The Geographical Distribution of Animals (S718) in 1876, Tropical Nature, and Other Essavs (S719) in 1878, and Island Life (S721) in 1880. Each work is still frequently referred to today: S718, for its formalization of the faunal region concept and treatment of zoogeographical methodology; S719, for its attention to the causes and characteristics of tropical floras and faunas (including its discussion of the concept of latitudinal diversity gradients); and S721, for its systemization of island types and biotas, and relation of glaciation processes to the known characteristics of geographical distribution of plants and animals. In Wallace's work in biology and anthropology, further departures from Darwinian thinking were evident. He continued to argue against some of Darwin's positions on human evolution, and in



4) Wallace in 1878, age 55 (Sources cited: C.H. Smith's webpage and A.R. Wallace's book *My Life*).

addition the latter's approach to sexual selection and several biogeographic matters. His 1870s writings were also characterized by an increased attention to social issues. In 1870 he spoke out against government aid to science (S157 & S158); in 1873 he produced essays on the Church of England (S225), free trade principles (S231), and the abolishment of trusts (S236); in 1878 he wrote on a suburban forest management issue (S292); and in 1879, again on free trade (S306, S310 & S312).

Meanwhile, personal problems were creating a considerable distraction. Most of the profits accrued from his Malay collections were badly invested, and lost. He was not well suited for most kinds of permanent positions, and despite applying for a number of them never succeeded in landing one. He took on odd jobs (editing other naturalists' manuscripts, correcting state-administered examinations, giving lectures, etc.) to help make ends meet, and moved progressively further and further from London to minimize costs and find more suitable living quarters. In 1870 Wallace took up a 500.-pound

VOLUME 26 NO.2 (2004), PG. 51

challenge from a flat-earther to produce a proof that the earth was not flat; he won the challenge with a neatly conceived demonstration (the so-called "Bedford Canal experiment") but, on a technicality, not a penny of the wager, and was seriously harassed by the loser for over ten years (see Garwood 2001 and Schadewald 1978). Eventually his financial situation degenerated far enough to cause a friend to intervene; in 1881, with help from Darwin (see Colp 1992), the government was convinced to grant him an annual civil list pension of 200. pounds for his services to science. It was not enough to live on by itself, but it helped.

Wallace the Social Radical and "Grand Old Man of Science" (1880-1913)

With the completion of his great works on biogeography, Wallace turned in earnest to social issues in the 1880s. He had been interested for many years in the problems associated with land tenure, and in 1870, at the special invitation of John Stuart Mill, had even become peripherally involved with the latter's Land Tenure Reform Association. But in early 1881, following the publication of his 'How to Nationalize the Land' (S329), he fully committed himself to the debate by helping start the Land Nationalisation Society. He also became its first President, holding that position until his death, over thirty years later (though after 1895 his participation in the organization's work was more inspirational than actual). Wallace's two most important writings on land were his Land Nationalisation (S722), published in 1882, and 1883's 'The "Why" and the "How" of Land Nationalisation' (S365). In these he argued that the State should, over the long-term, buy out large land holdings and then institute an

elaborate rent system based on a combination of location-specific and value-added-by-renter considerations. Wallace's writings on land nationalization feature many ideas in advance of their time, including suggestions for the legislated protection of rural lands and historical monuments, the construction of greenbelts and parks, and arguments for suburban and rural re-population and organization. In the early 1880s he also became interested in the anti-vaccination movement. As one of its most powerful spokespersons he would produce a series of impassioned writings (S374, S420, S536 & S616) that featured statistical epidemiological arguments, a great novelty for its time.

Wallace also took up the causes of the labor movement. He was an early proponent of overtime pay rates, but was against strikes: instead, he argued, employees should donate a portion of their pay to funds that could later be used to effect company buy-outs (\$560). Eventually he came around to endorsing socialism, but only as late as 1889, on his reading of the American Edward Bellamy's best-selling utopian novel Looking Backward (S418). As mentioned earlier, Wallace had since his early teen years had a genuine love for the work of Robert Owen, but had never quite believed in the large-scale practicality of Owen's approach. Neither had he been quite sure about its possible incursion on individual rights and freedoms. Looking Backward changed his mind on both issues. From 1889 on, Wallace would view socialism as a means whereby the average person might obtain a certain basic and acceptable standard of living; freedom from worrying over basics would then (in theory) allow a re-directioning of attention toward various means

of moral/ethical self-improvement (including spiritualism). His motto (borrowed from the English sociologist and writer Benjamin Kidd) would become "Equality of opportunity!", a plea for social justice.

The preceding list by no means exhausts the range of non-natural science-related subjects that Wallace at one time or another addressed. For example, he was an early supporter of women's suffrage, and was much admired by the members of the women's movement for his unqualified stand on the matter. He also came down heavily on many occasions on societal and governmental responses to eugenics, poverty, militarism, imperialism, and institutional punishment. On several occasions (S552, S553, S556 & S557) he wrote on the advantages of implementing a paper money standard; his efforts were later recognized by twentieth century economists interested in currency stabilization theory (the renowned American economist Irving Fisher even dedicated a book to him!). He sparred with the legal system at times, suggesting changes in the means of dealing with inherited wealth and trusts. He wrote two essays (S491 & S635) on how to re-establish confidence in the House of Lords, and one on how to revitalize the Church of England (S225). Many of the more conservative of the social and institutional elite came to wince at the mere mention of his name.

Although Wallace's travels as a self-supporting naturalist/explorer had ended with his return to England in 1862, he did not lead an entirely sedentary life his remaining years. As already mentioned, he began to move away from London as early as the 1860s; by 1881 he was in Godalming, in 1889, Parkstone, and then, finally,

VOLUME 26 NO.2 (2004), PG. 52



5) Wallace in 1903, age 80 (Sources cited: C.H. Smith's webpage and A.R. Wallace's book *My Life*).

Broadstone (near Wimborne, Dorset, and the English Channel) in 1902. For many years (until 1890) he travelled around the better part of England giving lectures and attending meetings, and even to Scotland and Ireland. He and his wife also spent several vacations and "botanizing excursions" in locations ranging from Wales and the Lake Country to Switzerland. In 1896 he gave an invited lecture on progress in the nineteenth century in the town of Davos in the latter country. But the main adventure of his post-Malay Archipelago life was a ten-month lecture tour to the United States and Canada in 1886 and 1887.

In late 1885 Wallace was invited to give a series of lectures on Darwinism at the Lowell Institute in Massachusetts. Once this obligation was met he would be free to arrange such other lectures as he might wish. For six months in late 1886 and early 1887 he stayed mainly in the vicinities of Boston, New York, and Washington, D.C., where he met countless individuals of note, up to



Neal's Vacation Lodges at Concan, Tx



Rio Frio at Concan, Tx



Cliffs on Banks of Rio Frio



Hill Country Along Rio Frio



Tubing on the Rio Frio



Scenery along the Rio Frio



Swimming Hole at Neal's Lodges



Great Place for a Blacklight



Neal's Cabins Overlooking Rio Frio

VOL. 26 NO.2 (2004) INSERT A



Light Up the Night - At Terry's and Greg's Cabin



Gulf Fritillary (Concan, Tx)



Ed, Greg, Charles, and 10% of Jeff



Terry Doyle and Mike Quinn



Ed's Dog - A New Member of the Society



Jeff Slotten and Charles Bordelon



Terry Doyle



Ed Knudson and Greg Muise



Charles, Greg, Jeff, and Ed

and including President Cleveland. In early April of 1887 he set out across the country, reaching California in late May of that year. There he was reunited with his older brother John, who he hadn't seen for nearly forty years. For several weeks he vacationed and lectured; one of his presentations was a talk on spiritualism entitled 'If a Man Die, Shall He Live Again?' (S398) - probably the single most successful lecture he ever gave. Significant events from his stay in the San Francisco area included tours of nearby redwood groves (in the company of the eminent naturalist John Muir), Yosemite Valley, and the future site of Stanford University (with Leland Stanford himself, with whom he had become intimate some months earlier in Washington, D.C.). In early July he left California to return eastward, ultimately back to England.

The American tour became the inspiration for Wallace's next major book, in 1889. Titled Darwinism (S724), it consisted largely of the topics he had lectured on, presented one chapter at a time. It did very well, and remains one of his most frequently cited works. Darwinism, while perhaps the highpoint of his later scientific work, was nevertheless only a very small part of it. Although social studies were absorbing more and more of his attention throughout the 1880s and 1890s, he was still left with plenty of time to crank out a steady stream of writings on more scientific subjects. During the 1890s alone he again published a total of over 150 works, dozens of these dealing with evolutionary, biogeographic, and physical geography subjects.

By the turn of the century, Wallace was very probably Britain's best known naturalist. By the end of his life, moreover, he may well have owned (based on evidence gleaned from contemporary sources) one of the world's most recognized names. While simultaneously continuing to publish scores of short works, between the years 1898 and 1910--mostly during his ninth decade---he managed to turn out (i.e., as author and/or editor) well over four thousand pages of monographic writings! His final two books were published in the year of his death, 1913. He remained active into his ninety-first year but slowly weakened in his final months. He died in his sleep at Broadstone on 7 November 1913; three days later his remains were buried nearby. On 1 November 1915 a medallion bearing his name was placed in Westminster Abbey.

Despite Wallace's radical associations and links with spiritualism, he was well honored during his lifetime (and he most likely would have been even more so had he not made it clear early on that he was not particularly interested in receiving honoraria). He was awarded honorary doctorates from the University of Dublin in 1882 and Oxford University in 1889, and important medals from the Royal Society in 1868, 1890 and 1908, the Société de Geographie in 1870, and the Linnean Society in 1892 and 1908. He even received the Order of Merit from the Crown in 1908 - quite an honor for such a n anti-establishment radical. He became a (reluctant) member of the Royal Society in 1893, and at one time or another had professional affiliations with the Royal Geographical Society, Linnean Society, Zoological Society, Royal Entomological Society, Ethnological Society (though apparently not as a member), British Association for the Advancement of Science, Society for Psychical Research, Anthropological Institute of Great Britain and Ireland, Ethological



6) Wallace in 1904, age 81 [Sources cited: C.H. Smith's webpage and The Origin of Life. A Reply to Dr. Schäfer. *Everyman* 1(1): 5-6 (18 Oct. 1912)].

Society (London), British Ornithologists' Union, Batavian Society of Arts and Sciences, British National Association of Spiritualists, Land Nationalisation Society, Anti-Vaccination League, and several lesser organizations.

Physical descriptions of Wallace dwell on his height (as a young man he was six feet one inch tall), long beard (maintained from his days in the Malay Archipelago on), and snow-white hair (starting in his fifties). He had a fundamentally lean build, and as the years passed came to walk with a bit of a stoop. His eyesight was not strong, with the result that his sparkling blue eyes were framed by spectacles for most of his life. He experienced various illnesses and ailments throughout his life, none of which individually seems to have had any great negative effect on his productivity.

As a person Wallace was decent to a fault; he possessed an apparently infinite tolerance for the weaknesses of others (and was surely victimized on a number of occasions as a result), but he was also known for not suffering fools

gladly. He thrived on public debate, but was personally modest, shy, and self-effacing. Still, by all accounts he was good company when at ease, and was much in demand as a public speaker. He also had a solid reputation as a writer and reviewer, and for all his "isms" was generally regarded by his peers as one of the period's greatest scientific reasoners.

Wallace's Accomplishments: A Summary List

The assessment of Wallace's contribution remains a work in progress. In what follows I briefly outline what various sources have pointed to as his noteworthy achievements. The entries are arranged chronologically as possible; most include one or more referrals to related (his own, and secondary source) writings identified in the 'Wallace Bibliography' and 'Writings on Wallace' sections:

*In 1851 ascends the Rio Negro/Uaupés River in South America further than any previous European: constructs a dependable map of the course of the river (S11, S714)

*In 1852 advances the riverine barrier hypothesis of species distribution patterns in Amazonia (S8; Colwell 2000, Gascon et al. 2000, Patton *et al.* 2000)

*Through his four-year collecting expedition to Amazonia (1848-1852) becomes recognized as an expert on the region's natural history (S3-S13, S713, S714; Beddall 1969, Balick 1980, Dickenson1996, Maslow 1996, Raby 1997, Knapp 1999, Camerini 2002, Knapp et al. 2002)

*Adopts the position, unusual for nineteenth-century workers, that uncivilized peoples are on the whole neither morally nor intellectually inferior to civilized peoples

*In 1855 writes and publishes essay connecting the facts of geographical and geological distribution to evolution (S20; George 1964, McKinney 1966 & 1972, Brooks 1984, Bueno H. & Llorente B. 2003)

*In 1855 engages in the first extensive collecting efforts and field studies on the orangutan (S23, S24, S26, S30, S715; Harrisson 1960, Raby 1997, Daws & Fujita 1999)

*Investigates and describes the faunal discontinuity now known as "Wallace's Line," c1856-1862 (S53, S78, S715; Mayr 1944, Simpson 1977, George 1981, Whitmore 1981, Camerini 1993, Diamond 1997, Van Oosterzee 1997, Armstrong 1998, Clode & O'Brien 2001, Erdelen 2001, Metcalfe et al. 2001, Bueno H. & Llorente B. 2003)

*Engages in extensive collecting efforts and field studies on birds of paradise, c1857-1860 (S37, S48, S55, S67, S715; Camerini 1996, Raby 1997, Daws & Fujita 1999, Fox 2001)

*In 1858 writes and publishes essay introducing the concept of natural selection (S43; Eiseley 1958, McKinney 1966 & 1972, Beddall 1968 & 1988, Moody 1971, Brooks 1972, Bowler 1976, Brackman 1980, Brooks 1984, Smith 1992, Gardiner 1995, Stevens 1995, England 1997, Moore 1997, Dawkins 2002)

*In 1858 becomes one of the first Europeans to set up a residence in New Guinea (S51, S65, S715) opines that Papuans are not Malays (S51, S301, S715)

VOLUME 26 NO.2 (2004), PG. 54

*Defends and eventually institutionalizes the faunal realms classification scheme of Philip L. Sclater (S52, S360, S494, S500, S718; Schmidt 1954, George 1964, Nelson 1978, Smith 1983 & 1989)

*In 1860 suggests that an international review board be established to settle questions regarding competing claims of priority in zoological nomenclature (S63)

*Collects 125,660 specimens (mostly birds and insects) during the eight-year (1854-1862) expedition to the Malay Archipelago (S715; George 1979, Baker 1996, Camerini 1996 & 1997, Raby 1997, Daws & Fujita 1999)

*In 1863 proposes a Darwinian explanation for the hexagonal construction of bees' cells (S83)

*In 1864 introduces a model of human racial differentiation based on the theory of natural selection (S93; Kottler 1974, Koch-Weser 1977, Schwartz 1984, Richards 1987, Shermer 1991, Fichman 2001)

*In 1864 introduces the concept of polymorphism (S96, S98; George 1964, Blaisdell 1992)

*In 1864 suggests that female butterflies may be more variable than males (S96)

*Makes fundamental early contributions to the theory of mimicry (S72, S96, S98, S121, S123, S134, S176, S272; Remington 1963, George 1964, Kimler 1983, Blaisdell 1992, Diamond 1994)

*Constructs an evolutionarilyconsistent theory of the necessity of aging and death (S419)

*Initiates the study of protective coloration in plants and animals, including inventing the concepts of "alluring colors," "deflexion colors," "warning colors," and "disruptive colors" (S129, S134, S138, S257, S272, S304, S318, S724; George 1964, Cronin 1991, Blaisdell 1992)

*In 1867 opines that Polynesian peoples are not of Malayan origin (S131; George 1964, Vetter 1999)

*In several essays contributes suggestions for the design of museums (S143, S170, S401, S402, S404, S405; Winsor 2000)

*In The Malay Archipelago (1869) produces a study that becomes the most famous work ever written on its subject, and one of the greatest nineteenth century scientific travel books (S715; Bastin 1986; Morgan 1996)

*In 1869 is one of the first to describe surface manifestations of internal soliton waves (S715) becomes known as the greatest living authority on the Indonesian region

*In 1870 advances an estimate of the age of the earth based in part on inferences drawn from land surface erosion rates (S146, S159, S367, S721; Marchant 1916, George 1964)

*Becomes known as one of Darwin's most persistent and successful defenders (S83, S107, S108, S140, S155, S175, S198, S210, S724)

*In 1874 is the first to link bird migration to natural selection (S244)

*Presents a range of evidence defending the permanence of the continental masses and oceanic basins (S269, S453, S718, S721; Fichman 1977, Michaux 1991)

*Promotes the use of ecogeographically-arranged displays of animal and plant forms in book figures and museum displays, leading to the development of the "faunal diorama" (S401, S718)

*In 1877 is one of the first to ask why color vision has evolved, and to suggest a possible answer (S272)

*In 1877 introduces the concept of recognition marks (S272, S389, S395, S485, S724, S732; George 1964, Cronin 1991)

*In 1878 is one of the first to consider the causes of latitudinal diversity gradients and related aspects of (what are now known as) r- and K-selection (S289, S290)

*In 1879 describes the causes of disjunct distribution patterns (S302; George 1964) develops the first theory of the causes of continental glaciation combining geographical and astronomical factors (S313, S520, S521, S721; Marchant 1916, George 1964)

*Makes early contributions to the systematic classification of island types (S316, S393, S465, S721)

*In 1880 presents the theory of alpine corridor dispersal to explain the existence of temperate and arctic plants in lower latitude locations (S721, S724)

*In 1880 becomes a vocal supporter of the ideas of American economist Henry George, helping him gain prominence (S369, S722; Plowright 1987, Silagi 1989, Andelson 1993, Jones 1994, Gaffney 1997)

*Develops a model of rent assessment based on (1) the location of a parcel of land relative to other services, plus (2) value added to the

VOLUME 26 NO.2 (2004), PG. 55

parcel by the renter (S329, S365, S466, S471)

*Is one of the first to draw attention to and provide evidence for the mouth-gesture theory of the origin of language (S169, S337, S518; Paget 1951, George 1964)

*In 1882 proposes that greenbelts be established near urban areas (\$722; George 1964)

*In 1882 proposes that rural areas and historic monuments receive legislated protection (S722; George 1964)

*In 1882 makes the suggestion that explosives be stored underwater (S562a, S729)

*In 1882 draws attention to, and extends, Müller's work on mimicry (S353, S359; Remington 1963, George 1964, Kimler 1983)

*In his analyses of small-pox incidence becomes one of the first to use statistical arguments in an attempt to resolve an epidemiological question (S374, S420, S536, S616; Clements 1983, Scarpelli 1985 & 1992)

*In 1885 expresses support for creating a minimum wage standard (S375, S734)

*In 1885 suggests it become law that all manufactured goods carry labels specifying their component materials, and that standards for those materials be set and administered by institutions representing each class of manufactures (S723)

*Through the book The Malay Archipelago becomes one of the most important influences on the writings of novelist Joseph Conrad (Clemens 1939, Sherry 1966, Hunter 1983, Houston 1997, Hampson 200, Stape 2000)

*In 1889 describes what is now known as the "Wallace effect," the process of selection for reproductive isolation (S724; Marchant 1916, Mayr 1959, Grant 1966, Sawyer & Hartl 1981)

*In 1889 discusses the significance of symmetrical color patterns in animals (S724)

*Criticizes eugenics and develops a model of "human selection" based on elevating the economic status of women (S427, S445, S649, S733; Clements 1983)

*Draws attention to work being done to investigate Southern Hemisphere glaciation episodes (S172, S456, S472, S480, S482)

*In 1893 advances the opinion that the Australian aborigines are a Caucasian people (S583, S720)

*Makes contributions to the theory of ice movement in glaciers (S124, S184, S233, S462, S481, S484)

*In 1893 all but proves Sir Andrew Ramsay's glacial origin theory of alpine lake basins (S462, S481, S484, S489)

*In 1898 becomes an early proponent of using paper money as the standard of value (S552, S553,S556, S557; Fisher 1914 & 1920, Patinkin 1993)

*Points to deserts and volcanoes as representing important sources of material for condensation nuclei, with special emphasis on the role of dust (S547, S728)

*In 1899 suggests that employees collectively put aside pay otherwise lost to strikes for the longer-term purpose of company buy-outs (S560)

*In 1899 suggests using fire hoses as a means of riot control (S567) *In 1903 becomes one of the first to identify the range of concepts inherent in what is now known as the "anthropic principle" (S606, S728, S732; Kazyutinsky & Balashov 1989, Balashov 1991, Dick 1996)

*In the early 1900s pioneers the field of exobiology with studies on the likelihood of life-sponsoring conditions in other parts of the universe (S602, S728, S730; Tipler 1981, Kevin 1985, Dick 1996)

*In 1907 debunks Perceval Lowell's idea that Mars is inhabited (S730; Hoyt 1976, Heffernan 1981, Hetherington 1981, Gould 1996-1997, Zahnle 2001)

*In 1907 predicts that the polar caps of Mars are made of frozen carbon dioxide, not frozen water (S730; also S728; Zahnle 2001)

*In 1910 is one of the first to suggest that the animal extinctions at the end of the Pleistocene might have been due to over-hunting by prehistoric humans (S732)

*In 1913 expresses support for paying double-time rates for overtime work (S734; Marchant 1916 (1891 letter from ARW to his daughter))

*Eventually attains status as history's pre-eminent tropical naturalist (S713, S714, S715, S719, S720; Beddall 1969, Quammen 1996, Raby 1997, Rice 1999, Camerini 2002)

*Eventually becomes known as the "father of zoogeography" for his many contributions to this field (S20, S53, S78, S715, S718, S719, S721; George 1964, Browne 1983, Brooks 1985, Ghiselin 1993, Quammen 1996, Taylor 2000, Bueno H. & Llorente B. 2003)

Biographical Sources

The best overall source of information on Wallace's life is still by far his own *My Life* (S729), published in two volumes in 1905. Marchant (1916) provides an early biographical review which includes many of Wallace's personal letters. Other general biographies include Marchant (1913), Hogben (1918), George (1964), Williams-Ellis (1966), Fichman (1981), Clements (1983), Hughes (1997), Wilson (2000), Raby (2001), Shermer (2002), Bryant (2003), and Fichman (2003). Much information

of a biographical nature is included in Poulton (1923-1924), Huxley (1927), Beddall (1969), McKinney (1972 & 1976), Morgan (1978), Brackman (1980), Brooks (1984), Eaton (1986), Hughes (1989), Quammen (1996), Raby (1997), Gander (1998), Severin (1998), Knapp (1999), Rice (1999), Camerini (2002), Berry (2002), and Fichman (2003). For information on archival sources, see the <u>"Wallace</u> <u>Archives"</u> section of this site.

[The author of this excellent biography of Alfred Russel Wallace is Charles H. Smith, B.A., M.A., M.L.S., Ph.D. Currently Associate Professor and Science Librarian at Western Kentucky University in Bowling Green, Charles Smith has been studying the works of Alfred Russel Wallace for over twenty-five years. Primarily a biogeographer by training, Dr. Smith also has multiple interests in the history and philosophy of science, systems theory, statistical analysis, and bibliography. Dr. Smith may be contacted for questions or comments at University Libraries, Western Kentucky University, Bowling Green, KY 42101, or by email at: charles.smith@wku.edu.

The membership of the Southern Lepidopterists' Society sincerely

thank Dr. Charles H. Smith for his permission to publish his biography of Alfred Russel Wallace and for the photographs and sketch incorporated in the text. The

photographs and sketch were obtained from the webpage of Dr. Smith and from the following original sources: photographs #1 to 5 from *My Life* by A. L. Wallace; sketch #6 from The Origin of Life. A Reply to Dr. Schäfer. *Everyman* 1(1): 5-6 (18 Oct. 1912).) – The Editor.]

BRIEF NOTE FROM THE CHAIRMAN ROBERT BEIRIGER

This will probably be the last newsletter before we meet in Gainesville for our Annual meeting in mid September. I had hopes of posting a list of officer nominees for 2005 in this newsletter, but as of this writing, our Officer Search Committee is still trying to find a person willing to serve as Chairman of our Society. I hope to have the nominations for the offices when we meet in September. I am sorry for any inconvenience that this may cause.

Your current officers are:

Chairman: Robert Beiriger

Treasurer: Jeff Slotten

Secretary: Irving Finkelstein

Membership Coordinator: Paul Milner

Member at Large: Marc Minno Editor: J. Barry Lombardini

Website Coordinator: Dave Morgan

If anyone has any interest in serving your Society, please contact me at Bostrichid@mail.ifas.ufl.edu.

FALL MEETING OF THE SOUTHERN LEPIDOPTERISTS' SOCIETY TO BE HELD IN GAINESVILLE, SEPTEMBER 17-19, 2004

(JOINTLY WITH THE ASSOCIATION FOR TROPICAL LEPIDOPTERA)

The Southern Lepidopterists' Society will meet with the Association for Tropical Lepidoptera on September 17-19, 2004, in Gainesville, Florida, at the Division of Plant Industry and the new McGuire Center. If anyone wishes to present a short talk or slide presentation please contact Tom Emmel (e-mail: tcemmel@ufl.edu). Tom is the meeting organizer for the the Association for Tropical Lepidopertera and paper titles should be directed to him. The meetings are to be held in the McGuire Hall conference room.

Also there will be person(s) light trapping and if anyone has any interest in this activity please contact Robert Beiriger (<u>Bostrichid@mail.ifas.ufl.edu</u>). Additional information concerning this fall meeting of the Southern Lepidopterists' Society will be posted on the SLS website (www.southernlepsoc.org/).

REPORTS OF STATE COORDINATORS

Alabama: C. Howard Grisham, 573 Ohatchee Road, Huntsville, AL 35811, E-Mail: chgrisham@Comcast.net

VOLUME 26 NO.2 (2004), PG. 57

Arkansas: Mack Shotts, 514 W. Main Street, Paragould, AR 72450, E-Mail: cshotts@grnco.net

David Rupe sent the following report to Mack: "...a possible new state record for Arkansas: *Calephelis borealis*, <u>Location</u>: Bell Slough WMA, Faulkner County, AR, Date: 22-May-2004. One individual was observed May 21, but wasn't captured. Two individuals were observed May 22, one being successfully captured as a voucher specimen. Habitat in the area includes a shale ridge covered with the butterflies host plant, *Senecio obovatus*." David states that he can provide the voucher specimen upon request, if need be. Also, if any questions, feel free to e-mail David or call him at home [(501) 470-9769].

David Rupe sent this follow up report to Mack Shotts who forwarded it to the Editor. "I made it to west Arkansas and found numerous species. Location: Poteau Mtn., Sebastian County, AR; date: 2-June-2004.

<u>Species:</u> Speyeria diana (numerous males), Speyeria cybele, Epargyreus clarus, Achalarus lyciades, Battus philenor, Papilio troilus, Satyrium calanus, Satyrium titus, Megisto cymele, Eurema nicippe, Polygonia interrogationis, Limentis arthemis astyanax, and again Calephelis borealis.

I am fairly certain that the *C. borealis* is a new county record for Sebastian County, they were numerous along intermittent stream channels. Craig Rudolph with the USFS, Southern Research Station has stated he captured *Calephelis* during a study he did about 10 miles south of Poteau Mtn., in Scott County. He wasn't certain about which species he had, but I would assume *C. borealis*."

Bob Barber sent the following report to Mack Shotts who again forwarded it to the Editor: "I found what is certainly *C. henrici* larvae on Carolina Buckthorn. I tried to rear them, but it was late, and all three larvae produced Tachnids. I will have to wait till next year to confirm positively. I put completed details on this web page with pictures. <u>http://odonate.com/AR/Lycaenid_Rhamnus.html.</u> Interestingly, this species is now found on the European Buckthorn (*Rhamnus frangula*) in New England and Southern Canada.

I also just located a local population of *Celestrina neglectamajor* (Appalachian Azure). Details on this web page: http://odonate.com/ARLEP/C_neglectamajor.html."

Florida: Robert Beiriger, 16356 Trafalgar Drive, East, Loxahatchee, FL 33470, E-Mail: bostrichid@mail.ifas.ufl.edu

Thomas Williams reported seeing *Alypia wittfeldi* (Family Noctuidae), March 28, 2004, Florida, Sarasota County, flying over impatiens, but not nectaring and *Empyrauma affinis* (Family Arctiidae) on April 2, 2004, Florida, Sarasota County, flying around a tree. Thomas reports having several other records for this species mostly around it's host plant, Oleander, and that it appears to be established in the area. This species was introduced into South Florida in the late seventies and appears to be spreading north. The past winter in South Florida was cooler than normal but without much freezing weather. Winters like the last one could allow tropical species to greatly expand their range north.

Robert Beiriger reported *Electrostrymon angelia* on April 1, 2004, at the Indian River Research and Education Center, Fort Pierce. This species was common nectaring on various flowers planted around the station.

April 4, 2004, Florida Lake County, off of US 19, *Incisalia niphon*, *Phyciodes phaon*, and *Wallengrenia otho* were feeding on scrub milkweed surrounded by sand pine. *Incisalia niphon* is a rare catch in Florida and highly sought after.

John Hyatt reports: "A trip to southern Florida (Dade, Monroe Cos.) over April 1-3 yielded essentially nothing. Butterflies were almost totally absent in the Keys (1 *I. brunnea* on Big Pine Key; saw a few *Pheobus agarithe* and

P. cresphontes, but absolutely no hairstreaks, mangrove skippers, or anything else flying.) Moths likewise absent at lights."

<u>Georgia:</u> James K. Adams, 346 Sunset Drive SE, Calhoun, GA 30701, E-Mail: jadams@em.daltonstate.edu (Please check out the new GA leps website at: <u>http://www.daltonstate.edu/galeps/)</u>.

Records are from James Adams (no notation or JA), Eleaner Adams (EA) and Irving Finkelstein (IF). Most records presented here represent new or interesting records (range extensions, unusual dates, uncommon species, county records, *etc.*) or records for newly investigated areas. Known County and State records are indicated. All dates listed below are 2004 unless otherwise specified.

Calhoun, GA (my house):

GEOMETRIDAE: Ceratonyx satanaria, Mar 14; Erastria cruentaria, Mar. 14 and Mar. 16; Metarranthis sp. (undescribed), Mar. 28 (COUNTY); Lobocleta ossularia, Apr. 12 - 17 & June 14; Cladara atroliturata, Mar. 23 (COUNTY). <u>NOCTUIDAE</u>: Colobochyla interpuncta, Apr. 19; Zale phaeocapna, Apr. 17 (COUNTY); Metria amella, Apr. 18 (COUNTY and first for northern GA); Achatodes zea, May 28 - 29; Lithophane antennata Apr. 2 (LATE); L. bethunei, Apr. 6 (LATE); Eupsilia sidus, Mar. 14 (COUNTY); Elaphria georgei, Mar. 29 - Apr. 23. <u>PSYCHIDAE</u>: Cryptothelia gloveri, June 10 (COUNTY).

Rocky Face ridgeline, top of Dug Gap Battle Mtn. Road, just SW of Dalton, Whitfield Co., June 3, 2004:

<u>NOCTUIDAE</u>: Oxycilla malaca, Ptichodis herbarum, Ptichodis bistrigata, Metalectra discalis, Megalographa biloba. <u>**GEOMETRIDAE**</u>: Eulithis explanata. <u>**PYRALIDAE**</u>: Compacta capitalis (COUNTY, third known from STATE).

Atlanta, Fulton Co., IF:

<u>GELECHIIDAE</u>: Telphusa longifasciella, Mar. 15; Dichomeris marginella, April 26, 2002. <u>NOCTUIDAE</u>: Metaxaglaea violacea, Dec. 29, 2003 (at Ansley Mall Kroger's) and Mar. 17 (behind IF's house). <u>GEOMETRIDAE</u>: Lobocleta ossularia, April 21.

Allatoona Dam Rec. Area, Bartow Co .:

<u>NYMPHALIDAE</u>: Chlosyne gorgone, April 22. <u>NOCTUIDAE</u>: Quandara brauneata (one collected, two more seen) Apr. 10; Comachara cadburyi, April 22; Baileya doubledayi, April 22; Lithophane signosa, April 22 (**REALLY** LATE!).

Dahlonega, Lumpkin Co., April 24:

LASIOCAMPIDAE: Heteropacha rileyana **NOCTUIDAE**: Eutelia pulcherrima, Morrisonia sp. (undescribed). **NOTONDONTIDAE**: Dasylophia thyatiroides. **GEOMETRIDAE**: Dyspteris abortivaria.

Taylor's Ridge Trail, north along Hwy. 136, 5 miles west of Villanow, Walker Co. (JA & IF):

Mar. 26, 2004

SATURNIIDAE: Actias luna. **NOCTUIDAE**: Idia aemula, Euclidea cuspidea, Zale horrida, Z. minerea, Z. obliqua, Z. confusa, Z. metatoides, Z. unilineata, Z. duplicata, Z. bethunei, Ptichodis herbarum, Baileya dormitans, Baileya sp. nov., Acronicta noctivaga, A. lobeliae, Lithophane querquera, Eupsilia cirripalea, Copivaleria grotei, Elaphria festivoides complex. **GEOMETRIDAE**: Orthofidonia flavivenata, Phaeoura quernaria, Selenia kentaria, Metarranthis sp. nov., Plagodis fervidaria, P. phlogosaria, Besma quercivoraria, Venusia comptaria (COUNTY), Anticlea multiferata. **THYATIRIDAE**: Euthyatira pudens. **PYRALIDAE**: Palpita magniferalis. **TORTRICIDAE**: Acleris sp. nr. maculidorsana.

April 17, 2004

SATURNIIDAE: Actias luna. **SPHINGIDAE**: Dolba hyloeus. **ARCTIIDAE**: Spilosoma congrua. **NOCTUIDAE**: Hemeroplanes scopulepes, Zale obliqua, Z. confusa, Z. horrida, Z. helata, Z. metatoides, Z. phaeocapna, Z. unilineata, Argyrostrotis sp, Euparthenos nubilis, Comachara cadburyi, Acronicta interrupta, A. lithospila, A. noctivaga, A. vinnula, A. modica, A. ovata, Phosphila miselioides, Chytonix palliatricula, Ulolonche modesta. **GEOMETRIDAE**: Orthofidonia flavivenata, Hypomecis nr. umbrosaria, Metarranthis duaria, M. hamaria, M. homuraria, Plagodis serinaria, P. alcoolaria, P. fervidaria, Antepione thisoaria, Nemoria mimosaria, Hethemia pistasciaria, Hydriomena exculpata, Lobocleta ossularia. **PYRALIDAE**: Pyrausta signatalis, Palpita illibalis. **TORTRICIDAE**: Retinia gemistrigulana.

May 29, 2004

SATURNIIDAE: Dryocampa rubicunda, Anisota virginiensis, Actias luna. APATELODIDAE: Olceclostera angelica. ARCTIIDAE: Haploa contigua, Grammia anna. NOCTUIDAE: Idia aemula complex, Polypogon atrilineella, Metalectra richardsi,, Catocala ultronia, Catocala gracilis, Polychrysia morigera (COUNTY, second in STATE), Lithacodia musta, Achatodes zeae. NOTODONTIDAE: Dasylophia anguina. LYMANTRIIDAE: Dasychira dorsipennata. GEOMETRIDAE: Metarranthis angularia, Plagodis phlogosaria, P. serinaria, Eulithis explanata, Heterophleps triguttaria. LIMACODIDAE: Euclea delphinii, Apoda y-inversum. MEGALOPYGIDAE: Lagoa crispata. PYRALIDAE: Tosale oviplagalis, Aglossa cuprina, Oneida lunulalis, Peoria sp, PTEROPHORIDAE: Geina tenuidactyla

Pigeon Mountain (west side), Walker Co., April 16 (JA & IF):

<u>HESPERIIDAE</u>: Erynnis icelus. <u>LYCAENIDAE</u>: Mitoura gryneus. <u>PAPILIONIDAE</u>: Papilio glaucus gynandromorph -- male left side, black female right side. <u>GEOMETRIDAE</u>: Trigrammia (formerly Semiothisa) quadrinotaria.

Gates Chapel Rd., 8 mi. N.W. Ellijay, Gilmer Co. (IF):

Mar. 18 - 20

LASIOCAMPIDAE: Phyllodesma americana. **NOCTUIDAE**: Zale bethunei, Z. lunifera, Z. minerea, Z. metatoides, Phoberia atomaris, Nedra ramulosa, Lithophane querquera, Eupsilia vinulenta, Sericaglaea signata, Psaphida grandis, P. electilis, P. rolandi, P. styracis, Feralia major, F. jocosa (COUNTY, second locality in STATE and significant SW extension from Rabun Co.), Orthosia revicta, O. hibisci, O. rubescens, Cerastis tenebrifera. <u>NOTODONTIDAE</u>: Symmerista albifrons. <u>GEOMETRIDAE</u>: Phigalia denticulata, P. titea, P. strigataria, Cleora sublunaria, Iridopsis vellivolata, Melanolophia canadaria, Epimecis hortaria, Ceratonyx satanaria, Lomographa glomeraria, Lambdina pellucidaria, Eutrapela clemataria, Nemoria lixaria, Cladara limitaria, Eupithecia spp.

May 1:

NOCTUIDAE: Oxycilla malaca. GEOMETRIDAE: Anagoga occiduaria.

June 11 - 12:

NOCTUIDAE: Calyptra canadensis. GEOMETRIDAE: Nematocampa resistaria.

The following records are from several sites visited during a May 10 - 15 trip to south Georgia. Records marked with "*" represent uncommon and possible STATE records; several of these species, though probably occurring at many localities in the southern part of the state, were unknown to me from GA. Numerous pyralids and

tortricids were collected during the following trip and remain unidentified. We're working on them!

Swainsboro, Emanuel Co., May 10-11:

SATURNIIDAE: Dryocampa rubicunda. **LASIOCAMPIDAE**: Malacosoma disstria. **NOCTUIDAE**: Parallelia bistriaris, Eudryas grata. **NOTODONTIDAE**: Peridea angulosa. **ARCTIIDAE**: Hyphantria cunea, Hypercompe scribonia, Halysidota tessalaris. **GEOMETRIDAE**: Melanolophia canadaria, Nematocampa baggettaria*, Idaea demissaria.

Twin City, Emanuel Co., May 10:

<u>SATURNIIDAE</u>: Dryocampa rubicunda, Callosamia angulifera. <u>SPHINGIDAE</u>: Lapara coniferarum. <u>ARCTIIDAE</u>: Hypercompe scribonia, Halysidota tesselaris. <u>COSSIDAE</u>: Givira francesca. <u>ATTEVIDAE</u>: Atteva punctella.

Ohoopee Dunes Natural Area, Tract #3 (Hall's Bridge Road Tract), 8 miles WSW of Swainsboro, Emanuel Co., May 10-11, 2004 (JA, EA & IF):

HESPERIIDAE: Epargyreus clarus. **PAPILIONIDAE**: Papilio glaucus, P. palamedes. LYCAENIDAE: Satyrium calanus, S. liparops liparops, Parhassius m-album. SATURNIIDAE: Automeris io, Antheraea polyphemus, Actias luna. LASIOCAMPIDAE: Malacosoma disstria, M. americana. APATELODIDAE: Apatelodes torrefacta, Olceclostera angelica/indistincta. MIMALLONIDAE: Lacosoma chiridota. SPHINGIDAE: Lapara coniferarum. ARCTIIDAE: Cisthene packardi, C. subjecta, Hypoprepia fucosa, H. miniata, Crambidia "pura", Holomelina aurantiaca, H. opella, H. immaculata, Spilosoma virginica, Grammia placentia, Halysidota tesselaris. NOCTUIDAE: Idia americalis, I. aemula, I. forbesi, I. julia, I. diminuendis, Polypogon theralis, P. littoralis, Renia fraternalis, Bleptina sp., Tetanolita mynesalis, T. floridana, Palthis alsopialis, Rivula propinquilinea, Macrochilo hypocritalis, Phyprosopus callitrichoides, Hypsoropha hormos, Phytometra rhodarialis, Arugisa watsoni, Panopoda rufimargo, P. carneicosta, Mocis marcida, Dysgonia smithii, D. similis, Drasteria grandirena, Zale metatoides., Metalectra tantillus, Lesmone detrahens, Argyrostrotis carolina/flavistriaria, A. anilis, Catocala clintoni, Marathyssa inficita, Nycteola frigidana, Nola sp. nr. pustulata*, Baileya ophthalmica, Oruza albocostaliata, Cerma cerintha, Tarachidia semiflava, T. erastrioides, Spragueia leo, Hyperstrotia pervertens, H. villificans, H. flaviguttata, H. nana, Acronicta brumosa, A. inclara, A. ovata, Polygrammate hebraeicum, Charadra deridens, Callopistria cordata, Chytonix sensilis, Phosphila miseloides, Condica videns, Ogdoconta cinereola, Stiriodes obtusa, Galgula partita, Anorthodes tarda, Elaphria excessa, E. festivoides, Balsa labecula, Leucania multilinea, Lacinipolia laudabilis, Orthodes crenulata, Agrotis venerabilis. One completely unknown, medium-sized reddish noctuid! NOTODONTIDAE: Datana ministra, D. integerrima, Nadata gibbosa, Heterocampa gutivitta, H. obliqua, Hyperaeschra georgica, Schizura ipomoeae, Oligia lignicolor, Hyparpax aurora^{*}. LYMANTRIIDAE: Dasychira meridionalis, Orgyia leucostigma. GEOMETRIDAE: Mellila xanthometata, Macaria pustulata, M. aequiferaria, M. bisignata, M. bicolorata, M. tranistaria, Digrammia eremiata, Eumacaria laetiferrugata, Narraga georgiana (first May record), Exelis pyloraria, Hypomecis sp., Anavitrinella pampinaria, Iridopsis defectaria, Protoboramia porcellaria, Epimecis hortaria, Lomographa vestaliata, Eugonobapta nivosaria, Lytrosis unitaria, Euchlaena obtusaria, E. amoenaria, E. madusaria, Episemasia solitaria*, Metarranthis homuraria, M. lateritiaria*, Patalene olyzonaria, Lambdina fiscellaria, L. athasaria, Prochoerodes transversata, Eutrapela clemataria, Tetracis crocallata, Tacparia sp.*, Nematocampa baggettaria*, Nemoria lixaria, N. rubrifrontaria, Scopula limboundata, Lophosis labeculata, Idaea tacturata, I. demissaria, Idaea eremiata, Lobocleta ossularia, Eupithecia sp. PYRALIDAE: Palpita magniferalis, Desmia funeralis, Epipaschia zelleri, Lepidopmys irrenosa, Conchylodes ovulalis, Herculia sp., Condylolomia sp., Pyrausta laticlavia, Acrobasis exsulella, Donacaula sp., Peoria sp. LIMACODIDAE: Apoda biguttata, A. y-inversum, Lithacodes fasciolaris, Isa textula, Isochaetes beutenmuelleri, Natada nasoni, Adoneta spinuloides, Prolimacodes badia. ZYGAENIDAE: Harrissina americana. COSSIDAE: Prionoxystus robineae, Givira anna. SESIIDAE: Synanthedon fatifera*, S. decipiens. URODIDAE: Urodus parvula. **OECOPHORIDAE**: Inga sparsiciella, Antaeotricha schlageri.

Ohoopee Dunes Tract 4 (Covena Tract), Emanuel Co., 8.5mi. SW of Swainsboro (IF, EA & JA):

SATURNIIDAE: Automeris io, Antheraea polyphemus, Callosamia securifera. LASIOCAMPIDAE: Artace cribraria, Malacosoma disstria, M. americana. APATELODIDAE: Olceclostera angelica/indistincta. MIMALLONIDAE: Lacosoma chiridota. SPHINGIDAE: Manduca sexta, Darapsa myron. ARCTIDAE: Cisthene plumbea, C. subjecta, Hypoprepia fucosa, Crambidia pallida, Holomelina aurantiaca, H. opella, H. immaculata, Spilosoma virginica, Grammia placentia, Hypercompe scribonia, Halysidota tesselaris, Cisseps fulvicollis. NOCTUIDAE: Idia americalis, I. aemula, I. forbesi, I. julia, I. diminuendis, Polypogon theralis, Renia nemoralis, Renia adspergillus, R. fraternalis, Bleptina sp., Tetanolita mynesalis, Palthis angulalis, Abablemma brimleyana, Nigetia formosalis, Phytometra rhodarialis, Hemeroplanis sp. nov., Arugisa latiorella, Panopoda rufimargo, Mocis marcida, Parallelia bistriaris, Drasteria grandirena, Caenurgia chloropha, Zale lunifera, Lesmone detrahens, Argyrostrotis carolina, A. anilis, Catocala ilia, C. clintoni, C. similis, Marathyssa inficita, Megnola spodia, Nola sp. nr pustulata, Cerma cerintha, Tarachidia semiflava, T. erastrioides, Spragueia leo, Hyperstrotia villificans, H. flaviguttata, H. nana, Acronicta brumosa, A. inclara, A. ovata, A. lobeliae, A. afflicta,, Polygrammate hebraeicum, Agriopodes fallax*, Charadra deridens, Eudryas unio, Callopistria mollissima, Chytonix palliatricula, Iodopepla u-album, Phosphila miseloides, Condica videns, Ogdoconta cinereola, Galgula partita, Cosmia calami, Amolita fessa, Anorthodes tarda, Elaphria excessa, E. festivoides, E. versicolor, Balsa labecula, B. tristrigella, Leucania multilinea, L. incognita, Lacinipolia laudabilis, Orthodes crenulata, Agrotis venerabilis, Agrotis subterranea. NOTODONTIDAE: Nadata gibbosa, Heterocampa gutivitta, H. umbrata, Macrurocampa marthesia, Hyperaeschra georgica, Schizura ipomoeae, Hyparpax aurora*, H. peropheroides*. LYMANTRIIDAE: Dasychira meridionalis, Orgyia leucostigma. GEOMETRIDAE: Macaria pustulata, M. bisignata, M. tranistaria, Digrammia eremiata, D. gnophosaria, Eumacaria laetiferrugata, Melanolophia candararia, Exelis pyloraria, Hypomecis sp., Anavitrinella pampinaria, Protoboramia porcellaria, Ectropis crepuscularia, Tornos scolopacinarius, Lytrosis unitaria, L. sinuosa, Euchlaena obtusaria, E. amoenaria, Episemasia solitaria*, Metarranthis lateritiaria*, Patalene olyzonaria, Prochoerodes transversata, Tetracis crocallata, Tacparia sp.*, Nematocampa baggettaria*, Nemoria rubrifrontaria, Scopula limboundata, Lophosis labeculata, Idaea tacturata, I. demissaria, Idaea eremiata, Idaea violacearia, Eupithecia sp. **PYRALIDAE**: Palpita magniferalis, Herculia sp., Desmia funeralis, Diasemiodes sp., Epipaschia superatalis, E. zelleri, Lepidopmys irrenosa, Conchylodes ovulalis, Colomychus talis, Diastrictus nr. fracturalis, Melitara prodenialis, Vaxi critica, Peoria sp. TORTRICIDAE: Sparganothis (4 spp.), Ecdytolophia sp., Choristoneura parallela. LIMACODIDAE: Apoda biguttata, A. y-inversum, Isa textula, Prolimacodes badia. ZYGAENIDAE: Harrissina americana. COSSIDAE: Cossula magnifica. URODIDAE: Urodus parvula. ATTEVIDAE: Atteva punctella.

Ludowici, Long Co., May 12 - 14, 2004:

<u>SATURNIIDAE</u>: Citheronia sepulchralis. <u>LASIOCAMPIDAE</u>: Artace cribraria, Malacosoma disstria. <u>SPHINGIDAE</u>: Xylophanes tersa. <u>NOCTUIDAE</u>: Paectes sp. <u>URODIDAE</u>: Urodus parvula. <u>PSYCHIDAE</u>: Oiketicus abbotii*.

Griffin Ridge WMA, Long Co., 2.5 mi. S of Ludowici, May 12-14, 2004 (IF, EA & JA):

SATURNIIDAE: Automeris io, Callosamia securifera. **LASIOCAMPIDAE**: Tolype notialis, Malacosoma disstria. **MIMALLONIDAE**: Lacosoma chiridota. **ARCTIIDAE**: Cisthene plumbea, C. subjecta, Hypoprepia fucosa, H. miniata, Clemensia albata, Crambidia pallida, Holomelina sp. nr opella*, Halysidota tesselaris. **NOCTUIDAE**: Idia americalis, I. aemula, I. scobialis, I. julia, I. rotundalis, I. diminuendis, I. lubricalis, Polypogon sp., Renia fraternalis, Renia discoloralis, Bleptina inferior, Parahypenodes fractillinea, Macrochilo hypocritalis, Abablemma brimleyana, Nigetia formosalis, Phytometra rhodarialis,, Arugisa latiorella, Scolecocampa liburna, Metalectra quadrisignata, M. richardsi, Panopoda rufimargo, P. repanda, Mocis marcida, Lesmone detrahens, Argyrostrotis carolina, Zale declarans*, Z. metatoides, Catocala andromedae, C. similis, C. sordida, Marathyssa inficita, Megnola spodia, Nola sp. nr pustulata, Paectes abrostoloides, Baileya doubledayi, Thioptera nigrofimbria, Homophoberia apicosa, Tarachidia semiflava, Hyperstrotia nana, H. flaviguttata, H. pervertens, Acronicta tritona, A. brumosa, Polygrammate hebraeicum, Chytonix palliatricula, C.

sensilis, Iodopepla u-album, Amolita fessa, Anorthodes tarda, Balsa labecula, Elaphria excessa, E. festivoides, E. chalcedonia, E. grata, Morrisonia sp. nov. (undescribed)*. NOTODONTIDAE: Nadata gibbosa, Heterocampa astarte, H. varia*, Schizura badia, Schizura ipomoeae, Hyparpax aurora*, H. peropheroides*. LYMANTRIIDAE: Dasychira tephra, Orgyia sp. GEOMETRIDAE: Macaria pustulata, M. distribuaria, M. promiscuata, Digrammia eremiata, Melanolophia canadaria, Hypomecis sp., Protoboramia porcellaria, Ectropis crepuscularia, Iridopsis defectaria, Lytrosis unitaria, L. sinuosa*, Euchlaena obtusaria, Episemasia solitaria*, Metarranthis lateritiaria*, Prochoerodes transversata, Nematocampa baggettaria*, Nemoria rubrifrontaria, N. lixaria, Synchlora aerata, Chlorochlamys chloroleucaria, Scopula limboundata, Leptostales laevitaria*, Lophosis labeculata, Idaea tacturata, I. scintullinaria*, Idaea eremiata, Idaea violacearia, I. bonifata*, Eupithecia sp. PYRALIDAE: Clydonopteron tecomae, Conchylodes ovulalis, Vaxi critica, Peoria sp. (2). TORTRICIDAE: Ecdytolophia sp., Choristoneura parallela. LIMACODIDAE: Apoda biguttata, Isochaetes beutenmuelleri, Isa textula, Euclea delpinii, Prolimacodes badia. MEGALOPYGIDAE: Megalopygidae opercularis. COSSIDAE: Cossula magnifica. ATTEVIDAE: Atteva punctella. SESIIDAE: Synanthedon rubrofascia.

Horse Creek Wildlife Management Area, Telfair Co., 12 mi. SW of Lumber City, May 14-15 (IF, EA & JA):

PAPILIONIDAE: Eurytides marcellus, Papilio troilus, P. palamedes, Battus philenor. **PIERIDAE**: Pieris rapae, Phoebis sennae, Abaeis nicippe. NYMPHALIDAE: Vanessa virginiensis, Junonia coenia, Phyciodes tharos. LYCAENIDAE: Strymon melinus, Everes comyntas. HESPERIIDAE: Epargyreus clarus, Thorybes bathyllus, Polites origines, Polites vibex, Wallengrenia otho, Oligoria maculata, Lerema accius. SATURNIIDAE: Dryocampa rubicunda, Automeris io, Actias luna, Antheraea polyphemus. LASIOCAMPIDAE: Tolype notialis, Malacosoma disstria, M. americana. MIMALLONIDAE: Lacosoma chiridota. SPHINGIDAE: Paratraea plebeja, Paonias excaecatus, Darapsa myron. ARCTIIDAE: Cisthene plumbea, C. packardi, Hypoprepia fucosa, H. miniata, Crambidia pallida, C. lithosioides, Clemensia albata, Holomelina opella, H. immaculata, Spilosoma virginica, Apantesis phalerata, A. nais, Halysidota tesselaris, Leucanopsis longa. NOCTUIDAE: Idia americalis, I. aemula, I. forbesi, I. julia, I. diminuendis, Chytolita petrealis, Renia discoloralis, R. fraternalis, Bleptina caradrinalis, Palthis angulalis, Tetanolita floridana, T. mynesalis, Phalaenostola larentioides, Abablemma brimleyana, Nigetia formosalis, Oxycilla mitographa*, Macrochilo hypocritalis, Hypsoropha hormos, Phyprosopus callitrichoides, Pangrapta decoralis, Arugisa latiorella, Cutina aluticolor*, C. distincta*, Isogona tenuis, Scolecocampa liburna, Panopoda rufimargo, P. carneicosta, Dysgonia smithii, Zale undescribed species* (COUNTY, second known location for the species), Litoprosopus futilis, Lesmone detrahens, Argyrostrotis sylvarum, A. carolina/ flavistriaria, A. anilis, Metalectra quadrisignata, M. tantillus, M. richardsi, Catocala ilia, C. clintoni, C. mira*, C. lincolnana*, C. grynea, C. pretiosa*, C. miranda*, Paectes pygmaea, Marathyssa inficita, Megnola spodia, Nola sp. nr pustulata*, Cydosia aurivitta (majuscula)*, Ozarba aeria, Tripudia quadrifera, Tarachidia erastrioides, Spragueia leo, Hyperstrotia secta, H. villificans, H. flaviguttata, Acronicta radcliffei, A. ovata, A. modica, A. tritona, Polygrammate hebraeicum, Charadra deridens, Eudryas grata, Callopistria cordata, Chytonix palliatricula, Argillophora furcilla, Ogdoconta cinereola, Galgula partita, Cosmia calami, Amolita fessa, Elaphria excessa, E. festivoides, E. grata, Balsa labecula, Leucania multilinea, Orthodes crenulata, Homohadena infixa*. NOTODONTIDAE: Datana integerrima, Nadata gibbosa, Heterocampa gutivitta, H. umbrata, H. biundata, H. obliqua, Peridea angulosa, Lochmaeus manteo, L. bilineata, Schizura ipomoeae. LYMANTRIIDAE: Dasychira meridionalis, D. manto, D. tephra, Orgyia leucostigma, O. definita. GEOMETRIDAE: Macaria pustulata, M. aequiferaria, M. bisignata, M. tranistaria, Digrammia gnophosaria, Melanolophia candararia, M. signataria, Hypomecis umbrosaria, Hypomecis lighter gray, Anavitrinella pampinaria, Iridopsis defectaria, Hypagyrtis unipunctata, H. esther, Lomographa vestaliata, Cabera quadrifasciaria*, Lytrosis unitaria, Euchlaena obtusaria, E. amoenaria, Episemasia solitaria^{*}, Metarranthis homuraria, Xanthotype sospeta, Nepytia semiclusaria^{*}, Lambdina athasaria, Tetracis crocallata, Nematocampa baggettaria^{*}, N. resistaria, Nemoria lixaria, Scopula limboundata, Idaea tacturata, I. demissaria, I. furciferata, Idaea eremiata, Idaea violacearia, Eulithis diversilineata, Eubaphe mendica, Costaconvexa centrostrigaria, Eupithecia sp. PYRALIDAE: Epipaschia superatalis, Desmia funeralis, D. maculalis, Diasemiodes jannasialis, Lepidopmys irrenosa, Munroessa icciusalis, Diacme ecclesialis, Pyrausta acrionalis, Vaxi critica, Urola nivalis, Tallula atrofascialis, Peoria spp., Crambus agitatellus. TORTRICIDAE: Sparganothis, Eucosma, Choristoneura parallela, LIMACODIDAE: Totricidea flexuosa, Apoda biguttata, A.

y-inversum, Lithcodes fasciola, Adoneta spinuloides, Isochaetes beutenmulleri, Isa textula, Natada nasoni, Prolimacodes badia. <u>ZYGAENIDAE</u>: Harrissina americana. <u>COSSIDAE</u>: Prionoxystus robineae, Cossula magnifica. <u>URODIDAE</u>: Urodus parvula. <u>ATTEVIDAE</u>: Atteva punctella. <u>SESIIDAE</u>: Synanthedon rubrofascia. <u>YPONOMEUTIDAE</u>: Yponomeuta multipunctella. <u>OECOPHORIDAE</u>: Inga sparsiciella. <u>COSMOPTERIGIDAE</u>: Euclemensia bassettella.

Louisiana: Michael Lockwood, 215 Hialeah Avenue, Houma, LA 70363, E-Mail: mikelock34@hotmail.com

Mississippi: Ricky Patterson, 400 Winona Rd., Vicksburg, MS 39180, E-Mail: rpatte42@aol.com

Ricky Patterson reports the following county records from 3 miles east of Satartia, Yazoo County (2 April through 9 April 2004): Amblyscirtes aesculapious, Amblyscirtes hegon, Mitoura gryneus, Anaea andria, Calycopis cecrops, Enodia portlandia missarkae, Anthocharis midea, Erynnis juvenalis, and Pyrgus communis.

On 30 May 2004 at a locality 5 miles ENE of Pontotoc, *Speyeria cybele* and *Synanthedon rubrofasciata* were collected and proved to be county records for Pontotoc county. Also on 30 May, at a locality 5 miles east of Marietta, Prentiss county, *Satyrodes appalachia appalachia and Enodia creola* were collected.

In the University of Mississippi collection, the following county records were noted (collected by Paul Lago and his students):

Problema byssus, 8 miles N of Oxford, Lafayette county, 25 June 2001 Atrytonopsis hianna, University of Mississippi Field Station, 25 April 2000 Panoquina ocala, 9 miles N of Oxford, Lafayette county, 10 August 2000 Feniseca tarquinius, 8 miles N of Oxford, Lafayette county, 28 March 2000 Enodia anthedon anthedon, Wall Doxey SP, Marshall county, 16 September 2003 Enodia portlandia missarkae, 11 miles NW of Oxford, Lafayette county, 17 September 2002

North Carolina: Steve Hall, North Carolina Natural Heritage Program, Div. of Parks & Recreation, 1615 MSC, Raleigh, NC 27699-1615, E-Mail: <u>Stephen.Hall@ncmail.net</u>

Place names refer to counties unless otherwise stated, and records are not new county reports unless indicated. RE = Randy Emmitt, HL = Harry LeGrand, JP = Jeff Pippen.

The spring season was slightly drier than normal. However, May had record warmth over most of the state, and April was rather warm also. This heat had the effect of speeding up the flights for the last half of the spring season. In general, butterfly numbers for most species was about normal, expect that *Danaus plexippus* was as scarce as ever, with just a few reports. There were no reports at all for *Vanessa cardui*, implying a slow summer and fall for this irruptive species.

Records are from March - May 2004.

PAPILIONIDAE:

Papilio appalachiensis, the species was reported from at least five mountain counties, as more observers become familiar with the field marks. This species often outnumbers the first brood of *P. glaucus*, particularly in May and at elevations above 3000 feet; for example, Ron Gatrelle observed several hundred in Clay on May 21. However, much is still to be learned about the lower elevation range (does it occur in the upper Piedmont?) and other aspects of its life cycle.

LYCAENIDAE:

Lycaena phlaeas, three were seen in a churchyard in Johnston (COUNTY) by Clyde Sorenson on March 21, and HL saw one in a fallow field in Scotland (COUNTY) on April 17. These represent slight eastward extensions along the edge of the range in the upper Coastal Plain. The fact that the species has not been found at most heavily worked counties in the adjacent areas to the west, such as the eastern Piedmont, strongly suggests that this

ruderal species is not native to the region.

Fixsenia favonius favonius, JP and Rob Van Epps photographed up to six individuals of this taxon at a well-known site in New Hanover on May 15; and they saw another in nearby Brunswick on the same day. This area is at the northern end of the taxon's range, and thus there is some slight hint of characters of *F. favonius ontario*.

Callophrys irus, Scott Hartley photographed one at Weymouth Woods preserve in Moore on April 16, a first for that park in recent decades, despite good-looking habitat. RE had a state record count of 18 at Holly Shelter Game Land in Pender on April 17.

Callophrys hesseli, HL observed two in Sampson (COUNTY) on April 3, and he and Derb Carter saw another there on the following day.

NYMPHALIDAE:

Chlosyne nycteis, an excellent single-observer count, especially near the eastern edge of the range, was 200 seen by HL at Cedarrock Park in Alamance on May 2.

Euphydryas phaeton, Kurt Fesenmyer found a new colony of this scarce species in Graham (COUNTY); he saw about 15 individuals in a man-opened wetland (at a pipeline/powerline crossing of a creek) on May 19. Reports of this species in the state have been relatively scarce in recent years, though most sites are on private property where access to check older records can be difficult.

HESPERIIDAE:

Hesperia metea, RE observed one at the Caswell Game Land in Caswell (COUNTY) on May 7, a late date for the species in the Piedmont.

Poanes hobomok, HL observed single individuals at two sites at Eno River State Park, Orange (COUNTY), on May 4 and 5. This county lies in the lower Piedmont, far eastward of previous state records in the foothills. However, Virginia has records from the Dismal Swamp in the southeastern corner of the state, as well as scattered records from the lower Piedmont and upper Coastal Plain; and the species has been reported in the Atlanta region in Georgia. Thus, on a regional scale, the sightings in central North Carolina are not overly out-of-line. Yet, this park and county have been well-worked in the past decade, and any "new to the eastern Piedmont" butterfly for the state is quite notable.

Euphyes pilatka, a record early (by a week) individual was seen in New Hanover on May 15 by HL and JP.

Atrytonopsis hianna, a very good count for the lower Coastal Plain was 25 seen and photographed by JP and party at Holly Shelter Game Land in Pender on April 24. The species is much more widespread in the lower Piedmont, where it is often easily found in powerline clearings and other weedy fields.

Amblyscirtes carolina, an exceptional count for the Piedmont was 20 noted on a Carolina Butterfly Society field trip to northeastern Franklin on April 18.

South Carolina: Ron Gatrelle, 126 Wells Rd., Goose Creek, SC 29445, E-Mail: gatrelle@tils-ttr.org

Tennessee: John Hyatt, 5336 Foxfire Place, Kingsport, TN 37664, E-Mail: jkshyatt@aol.com

John Hyatt reports the following: 18 April, 2004, TN, Unicoi Co., vic. Unicoi: *I. irus augustinus* and *I. henrici* were flying. June 1, Unicoi Co., Unicoi Mtn at NC state line, *ca.* 3500': *P. appalachiensis* and *C. neglectamajor*.

Texas: Ed Knudson, 8517 Burkhart Road, Houston, TX 77055, E-Mail: eknudson@earthlink.net

Much of Texas had a rather cool, wet spring, following a warm, wet winter; Houston and points south

having a winter with only light frost and no hard freezes. Knudson & Bordelon were not in the field until April.

The most interesting late winter find in the lower Rio Grande Valley was "Thecla" (Ziegleria) guzanta, which was reported by Doyle in the last issue of this newsletter. A specimen was also collected in Big Bend NP in late May by Nick Grishin, confirming Ro Wauer's earlier photographic record. This rather obscure hairstreak may be "invading" Texas and should be looked for anywhere along the Rio Grande.

Knudson spent a week in San Antonio, April 18-26, including a weekend visit to Concan, April 23,24. The most interesting finds were Sesiids. *Cissuvora ampelopsis* was common at several localities in north and northwest San Antonio during this time, males coming to the PB-PATA lure (EZ-ODDOH). At least 70 specimens were collected by Knudson, Doyle, and Peigler. The males fly between 3-5 PM. *Zenodoxus palmii* was also common during this time and continued to fly into late May. This species comes to a variety of lures, especially ZZ-ODDA. The males fly from about 1:30- 6 PM. One male of *Carmenta phorodendri* was collected at light in western San Antonio on April 25 (Knudson). In Concan, that weekend, collecting was limited by heavy rain and rather cool temps. Several fresh specimens of *Sphinx istar* were found, as well as many of the usual Concan species, but many others were absent.

The next visit to Concan was during the Southern Leps. field meeting on May 20-22. At least 10 people attended this meeting, including Knudson, Bordelon, Lombardini, Slotten, Howard Grisham, Michael Lockwood, Michael Lefort, JF "Terry" Doyle, Mike Quinn, and Greg Muise. The collecting during the meeting was disappointing, as many species were unaccountably absent, especially Catocalas. The best things Knudson found were several specimens of the cossid, *Inguromorpha* new sp. near *basalis*, and a gracillarid (*Parectopa* sp.) that he had never seen before. It is similar to *P. robiniella*, but twice as big and differently marked. One specimen of the geometrid, *Melanchroia chephise* was collected on flowers of *Eisenhardia* sp. Some of those at the meeting visited Hondo Creek in Medina Co., to collect *Chlosyne janais*, which was abundant (mostly late instar larvae and pupae). On the way to Concan on May 20, Knudson & Bordelon stopped along the road about 1 mile east of D'Hanis (Medina Co.,) to look for Hairstreaks (mainly *S. alcestis*) and Yucca moths (which were found in every inflorescence we checked). Bordelon spotted a Megathymid, which appeared to be *Stallingsia maculosa*, but was not able to catch it.

During mid-late May, Bob Borth and Hugo Kons were on a collecting trip to east and central Texas and narrowly missed visiting us in Concan. They were quite successful in east Texas, less so in the hill country. A few of the more interesting records included: <u>Sesiidae</u>: *Synanthedon arkansasensis*, fairly common at and light and BAIT! (fermented fruit, not pheromone), at Bastrop St. Pk., Bastrop Co., 27 May, and Double Lake, San Jacinto Co., on 20-May; <u>Sphingidae</u>: *Darapsa versicolor*, light and bait, Sabine Co., Sabine NF, 20 May and Martin Dies St. Pk., Jasper Co.; <u>Noctuidae</u>: *Metalectra cincta*. at light Hondo Creek, Medina Co., 23 May; *Catocala olivia*, several localities including Double Lake and Martin Dies SP; *Catocala lincolnana*, Sabine NF, *Catocala louiseae*, Bastrop SP and Double Lake.

Jeff Slotten reported getting a specimen of *Catocala messalina* at Boykin Springs, Angelina Co., on May 28. This is the first record from east Texas.

On June 5, Knudson & Bordelon collected for several hours under the Sabine River Bridge, Orange Co. (at the TX-LA border). There were many aquatic and marsh pyralids, and small numbers of noctuids, cossids, and others. The best catch was a pair of *Carectocultus dominicki* (Crambinae). The sesiid, *Paranthrene dolli*, was collected in a pheromone trap.

On June 11,12, Knudson and Bordelon collected near Six Mile, Sabine Co., TX, with poor results. One specimen of the sesiid, *Synanthedon rileyana* was taken in a pheromone trap. Other moths taken included *Eacles imperialis* fm. "nobilis", *Sphecodina abbotti, Acronicta noctivaga, A. hamamelis,* and *Cosmopterix nitens.*

A female specimen of what appears to be *Papilio glaucus garcia* was photographed by Nick Grishin in Big Bend NP, in late May. This dark female is the first known US record of this subspecies (or species, depending on your interpretation).

In Spring Valley, Harris Co., we have found little of interest so far this year. The only semi-interesting things were micros, mostly found in late May and early June. <u>Tineidae</u>: *Diataga leptosceles, Diachorisia marginimaculella* or close, (the first I have seen from TX), *Acrolophus mycetophagus* (abundant); *Oecophoridae*: *Martyringa xeraula* (Meyr.) (*apparently *M. ravicapitis* is a synonym of this introduced species).

Virginia: Harry Pavulaan, 494 Fillmore Street, Herndon, VA 22070, E-Mail: pavulaan@aol.com

SOUTHERN LEPIDOPTERISTS' SOCIETY c/o J. BARRY LOMBARDINI, THE EDITOR 3507 41st Street Lubbock, Texas 79413