

Minutes of the 2019 Annual Meeting of the Georgia Entomological Society

Executive Committee Meeting Minutes

April 10, 2019. Lake Blackshear Resort, Cordele, GA

Attending: Dan Suiter (Past-President), Stan Diffie (Secretary-Treasurer), Ed Mondor (President and Local Arrangements), Ted Cottrell (2020 Site Selection), Wayne Gardner (JES), and Nancy Hinkle (President-Elect).

As a show of welcome, Albert (Resort General Manager) treated the Executive Committee to dinner in the resort restaurant. Also, he provided a complimentary bottle of wine.

Local Arrangements Report (Ed Mondor) –Welcomed everyone to the meeting. He made sure everyone was aware that the meeting would be held in Ballroom A and the luncheon and posters would be in Ballroom B. Ed discovered the real costs associated with putting together a program such as this. Lunch costs about \$30 per person, the mixer is about \$10 per person, and breaks are \$12. His concern is student registration is \$25, so we are losing about \$27 per student who attends. This year we are expecting 40 students, so we could lose almost \$1200. He suggested raising student registration to \$35 to help offset the losses. To assist with this shortfall, Ed suggested raising regular member registration to \$175 for Early Bird and \$250 for late registration. He arrived at this figure after discussion among the committee with Dan and Wayne saying for Early Bird to be effective, the late registration had to ‘hurt.’ The late registration concept is not to raise money but to help with getting an accurate head count in planning for the meeting.

Program Committee (Nancy Hinkle) –Nancy apologized for being incompetent—a few errors would be announced for the program. A new software program at UGA occasionally drops your work and this appears to have happened while she was putting together the program. There are 27 posters with 20 of those in the student competition. There are 16 student papers and 21 regular papers. Ed suggested a Google Docs template to load and submit papers. This would keep the Program Chair from having to re-type the submitted titles. There were 115 copies of the program printed. The Founders Award is in honor of Dan Hagan and Lance Durden will give the lecture.

Awards Committee (Dan Suiter)—Only three students submitted applications for the Ph. D. scholarship and Pin-Chu Lai was selected for the Ph. D award. Only one student (Tyler Follman) applied for the M.S. scholarship.

Nominations Committee Report (Dan Suiter) – There are three candidates for President-Elect: Scott Croxton (industry), David Shapiro-Ilan (USDA), and Ash Sial (university). Bios were emailed to the registrants two weeks prior to the meeting. A few copies of the bios will be available at the registration desk. Nancy Hinkle, as President-Elect cannot hold two elected offices at the same time. So, Kris Braman and Dan Hagan have agreed to run for the vacant office of Historian.

Financial Report (Stan Diffie) – The financial report for 2018 was presented (attached) to the committee. There was a net loss of \$4600 last year. This included an \$1100 deposit for this year’s meeting and a \$1400 payment to the JES to assist in their finances. The society is still in good shape financially with over \$50,000 in the bank.

Membership Committee (Stan Diffie)—Approximately 220 members are currently on the roll and 25% paid dues or attended the meeting in 2017.

Journal of Entomological Science Annual Report (Wayne Gardner)—In October 2018, the JES was approximately \$12,000 in the RED. This was due to non-payment from authors, mainly located in foreign countries. There were about 21 outstanding invoices at that time. Wayne contacted the authors, then the department heads, and finally the deans of the represented institutions. He threatened to cut off submissions from anyone associated with that institution. He now has only 4 outstanding invoices and does not expect to receive those payments. It was at this time that he requested a percentage of the GES dues which is a part of our By-Laws. Submissions are up but may decrease with this crackdown on delinquent bills. This will not be a bad thing. Acceptance rate has decreased to 40% which is also good. Wayne will retire from UGA this May but will stay on as Editor of the journal. The journal currently has \$10,000 in the bank.

Site Selection (Ted Cottrell) – There are three options the committee has investigated for 2020. The UGA Tifton Conference Center, Callaway Gardens, and Villas by the Sea. Ted did not have a particular choice as all had pros and cons. Callaway is trying very hard to get us to return, but we did lose a lot of money the last time we were there. They have offered to waive the \$2500 room fee. Tifton wants to charge \$7.00 per person per day and there is no hotel close by. Villas by the Sea may be too small for the meeting and their quoted conference fee was a lot higher than the last time we met there.

Jim Oliver passed away in July 2018 and the new B.S. Award will be named for him.

Final Business Meeting Minutes

April 12, 2019. Lake Blackshear Resort, Cordele, GA

Ed Mondor presided over the Final Business Meeting of the 83rd annual GES meeting. Ed passed out an agenda which was promptly approved.

The reading of the 2018 Minutes was waived by a motion from Nancy Hinkle and a second by Will Hudson.

Membership Report (Stan Diffie)—Stan presented an impromptu report of the society. He reported 168 regular members, 10 emeritus/fellow/founders, and about 60 students. Approximately 40% of the member had paid dues and/or registered for the meeting this year.

Necrologist Report (Stan Diffie)—Dr. Jim Oliver passed away in July 2018. A moment of silence was held in his memory.

Secretary/Treasurer's Report (Stan Diffie) – The financial report covering activity in 2018 was distributed prior to the meeting and is attached. Stan Diffie reported a loss of \$4600 in 2018 due in part to an \$1100 deposit for this year's meeting and a payment of \$1400 to the JES. The society currently has \$60,000 in reserves. Ed Mondor explained the need to increase registration to \$175 for members and \$35 for students. Discussion followed. Stormy suggested keeping the spouse registration at \$25. David Buntin made a motion to accept and Will Hudson seconded. A voice vote was taken with no opposition. Ed then put forth the need for Early Bird registration in order to encourage people to commit so a more accurate head count could be made prior to the meeting. A discussion followed, and Will Hudson motioned to accept with Joe Knoll seconding. The voice vote was without opposition. Stormy suggested registration was required at the time of paper/poster submission.

Audit Report (Stormy Sparks) – Stormy read the audit report (attached). The report stated that the books of the Society were found to be in good order.

Nominations (Dan Suiter)—Dan announced the winner for President-Elect was David Shapiro-Ilan. Also, Dan Hagan had decided against running for Historian and there were no nominations from the floor. Kris Braman was voted to the position by voice vote.

Insect Survey (Mark Abney) – Mark will submit the full report to the webmaster next week. The committee is working to put archived copies on the web also. The surveys may be on the web as College Publications but should be on our website or linked from our pages.

Fun Run (Jason Schmidt) – Tanner Sparks was awarded first prize with a time of 35 minutes and 2 seconds. Joe Knoll might have taken a wrong turn and ran the course twice yet trailed in time by only 2 minutes. Lauren Perez finished first among the females.

Fishing Tournament (Will Hudson) – Phillip Roberts won the tournament this year by catching a single catfish. The tourney is under protest by Mark Abney again.

T-shirts (Scott Horn)—a decision was made to sell t-shirts this year as part of the annual meeting. In the past, the society has paid between \$250-\$350 per year for shirts. These were given to the Fun Run participants. Michelle Tremblay designed the shirts and Scott had 50 printed in Athens. The net cost was a loss of \$50 this year. It was suggested that a design contest should be held.

Silent Auction (Ed Mondor)—another first this year was a silent auction. Donations were received at the registration table. These were displayed on tables in Ballroom B. The auction raised \$411 in its inaugural year.

Resolutions (Shimat Joseph) – David Buntin moved to not read the resolutions but just have them included in the minutes on the website (attached).

Snapp Award – The Snapp Award, for best presentation by a regular member, was presented to Phillip Roberts.

Site Selection (Ted Cottrell) –Ted presented the option with the understanding that the committee may have to make the final decision after more firm numbers were obtained from the sites. The options for the 2020 meeting included Tifton, Jekyll Island, and Callaway Gardens. Pros and cons of each venue were discussed. Villas by the Sea on Jekyll Island seemed to be the favorite but there was some concern that the number of attendees may be too large for the venue. David Buntin made a motion to go back to Jekyll with Tifton serving as a back-up. Samuel Johnston seconded the motion.

Ed thanked Lisa Ames for her service to the photo salon, Brett Blaauw for operating the computer the entire session, Nancy Hinkle for putting together the program, Stan Diffie for handling everything, Michelle Tremblay for the t-shirts, silent auction and programs, Scott Horn for getting the t-shirts printed, and Mark Abney for handling the poster boards.

Ed Mondor passed the President's gavel to Nancy Hinkle.

Nancy Hinkle presented Ed Mondor a plaque in gratitude for his service as GES President.

Nancy struck the gavel to mark the end of the meeting.

GES Financial Report for period from Dec. 31, 2014 through Dec. 31, 2018

ASSETS	2014	2015	2016	2017	2018
Checking	45004.39	37434.36	26617.27	17779.69	9896.14
PayPal	14149.60	22553.21	28596.31	37779.78	1047.18
CD					40000.00
Total	59153.99	59987.57	55213.58	55559.47	50943.32
Income					
Registration/Dues	9685.00	9145.00	6720.00	8015.00	9490.00
Meeting Sponsors	2000.00	1950.00	800.00	3100.00	1850.00
Expenses					
Secretary of State	30.00	30.00	30.00	30.00	30.00
Bank Checks	23.25	0	0	0	0
Bank Account Fees	121.44	127.10	127.10	123.50	28.01
PayPal Fees	295.97	281.39	281.39	307.46	391.35
JES--administrative	2500.00	2500.00	2500.00	2500.00	2500.00
JES--support	0	0	0	0	1428.00
Meeting Expenses					
Venue		3803.66	5921.50	5543.93	7162.88
Supplies		972.59	450.64	734.25	699.59
T-shirts		343.20	253.80	233.80	0
Scholarships		1000.00	500.00	500.00	1000.00
Awards		775.00	775.00	775.00	775.00
Invited Spkrs		0	885.96	144.48	0
Plaques		588.20	537.70	606.70	779.50
Current Assets 04/01/19					
So. GA. Bank					10095.07
So. GA. Bank CD					40000.00
PayPal					11135.23
TOTAL					61230.30

Report of the GES Resolutions Committee

12 April 2019

Whereas, the **83th** Annual Meeting of the Georgia Entomological Society was convened April 10-12, 2019 at **the Lake Blackshear Resort and Golf Club, in Cordele, Georgia**; and

Whereas President **Ed Mondor**, through dedicated hard work, organized and directed the Georgia Entomological Society during 2018-19, and provided superb leadership for the 2019 annual meeting; and

Whereas, **Lance Durden** did make an excellent Founders' Lecturer to honor **Dan Hagan** as the 2019 GES Founder Honoree; and

Whereas, **Ed Mondor** and the Local Arrangements Committee organized and managed an excellent foundation for this meeting; and

Whereas, President-Elect **Nancy Hinkle** organized an excellent paper and poster session, and coordinated an interesting and informative sessions; and

Whereas, the industry sponsors, **AMVAC Chemical Corporation, Arrow Exterminators, BASF, Bayer CropScience, Corteva AgriScience, Nichino America, Orkin, Syngenta, Terminix, Valent USA Corporation** generously provided refreshments during the 2019 Annual Meeting;

Be it therefore resolved that the Georgia Entomological Society extend its sincere appreciation and thank you to all who have contributed to the success and enjoyment of the **83th** Annual Meeting.

Respectfully submitted,

Shimat V Joseph, Chair

David Buntin, Member

JOURNAL OF ENTOMOLOGICAL SCIENCE

2018 ANNUAL REPORT

Volume 53 of the *Journal of Entomological Science* was published in 4 quarterly issues both online and in print. There were 575 total pages in the volume with 48 scientific articles and 11 scientific notes. For those 59 manuscripts published in volume 53, the average time from receipt of the manuscript to action taken on acceptance was 81 days (See Table 1 for summary data by volume from 2005 through 2018). Cover photos for each of the issues were provided by Brett Blaauw (no. 1), Edward Mondor (no. 2), Lisa Ames (no. 3, no. 4). These were selected from among the entries in the 2017 GES Photo Salon.

During 2018, 154 manuscripts were submitted for consideration of publication in the Journal through the PeerTrack online review system managed by our publisher Allen Press. The acceptance rate for those submissions currently stands at 41.1% with 8 manuscripts out for revision by the authors. A summary by year of total submissions, acceptance rate, and journal account balances and net income for 2005 through 2018 is shown Table 2.

Susan Thornhill, Business Manager, reported a balance of \$10,317.77 in the *Journal* checking account at Regions Bank (Griffin, GA) as of 31 March 2019. Income for 2018 includes \$13,494.00 as a Royalty Payment for Revenue Share and Ancillary Revenue for 2017 from BioOne. Her report of the deposits, disbursements, and balances for the fiscal year is in Table 3.

Respectfully submitted this 4th Day of April 2019,



Wayne A. Gardner, Editor

Table 1. Comparative summary report for *Journal of Entomological Science* of the number of papers published, total number of pages printed, and the average time from receipt of the papers to acceptance for volumes 40 (2005) through volume 53 (2018).

Volume	Year	Scientific Articles	Scientific Notes	Total Articles	Total Pages	Time to Acceptance
40	2005	47	14	61	484	89 d
41	2006	34	20	54	420	79 d
42	2007	51	18	69	622	81 d
43	2008	34	17	51	459	87 d
44	2009	35	11	46	420	79 d
45	2010	33	12	45	402	106 d
46	2011	31	10	41	348	84 d
47	2012	31	13	44	384	90 d
48	2013	32	11	43	364	80 d
49	2014	31	15	46	424	83 d
50	2015	23	10	34	366	91 d
51	2016	25	10	35	336	61 d
52	2017	36	18	54	471	81 d
53	2018	48	11	59	575	81 d

Table 2. Comparative summary report for *Journal of Entomological Science* manuscript submissions, acceptance rates, ending account balances, and net income by year for 2005 through 2018.

Year	Total Submitted	Accept Rate	Ending Balance	Net Income
2005	68	91%	\$38,985.10	(-) \$6,309.00
2006	85	90%	\$49,758.36	\$10,773.26
2007	61	85%	\$53,353.91	\$3,595.55
2008	43	93%	\$51,853.43	\$1,500.48
2009	54	85%	\$57,339.04	\$5,485.61
2010	47	87%	\$51,416.61	(-) \$5,922.43
2011	53	85%	\$49,629.66	(-) \$1,786.95
2012	58	80%	\$45,789.26	(-) \$3,840.40
2013	45	85%	\$40,461.84	(-) \$5,327.42
2014	41	83%	\$39,982.94	(-) \$478.90
2015	45	81%	\$27,237.43	(-) \$12,745.51
2016	62	74%	\$25,500.58	(-) \$1,736.85
2017	147	55%	\$8,690.73	(-) \$16,809.85
2018	154	41%	\$10,317.77	\$1,627.04

Table 3. Summary report of *Journal of Entomological Science* account with deposits, disbursements, and beginning and ending balances, 1 March 2018 through 31 March 2019.

Beginning Balance [3/1/2018]		\$8,690.73
Deposits (+)		57,983.80
Disbursements (-)		56,356.76
Ending Balance [2/28/2014]		\$10,317.77
<u>Deposits</u>		
Library Subscriptions		\$2,340.00
Publication and Reprint Charges		\$40,721.80
GES Dues Share		\$1,428.00
Royalties		\$13,494.00
Total Deposits		\$57,983.80
<u>Disbursements</u>		
Allen Press Fees and Charges		\$53,602.27
Banking Fees		\$1,294.98
VISA/MC/Discover Fees (Regions Bank)	\$1,828.49	
Checking Account Fees (Regions Bank)	\$36.00	
Refund (Double Payment Publication Costs)		\$890.00
Total Disbursements		\$56,356.76

Award Winners

Georgia Entomological Society Annual Meeting April 10-12, 2019. Lake Blackshear Resort, Cordele, GA

The following awards were presented at the 83rd GES Annual Meeting:

Founder Honoree: Dan Hagan
Founder's Lecture: Lance Durden

GES PhD Scholarship: Pin-Chu Lai

GES MS Scholarship: Tyler Follman

J.H. Oliver Jr. Award (BS oral presentations):

First Place: Sierra King
Second Place: Ari Wernick
Third Place:

T.L. Bissell Award (MS oral presentations):

First Place: Lauren Perez
Second Place: Sarah Hobby
Third Place: Carson Bowers

C.M. Beckham Award (PhD oral presentations):

First Place: Jason Chen
Second Place: Midhula Gireesh
Third place: Jean Liu

U.E. Brady Award (Student poster presentation):

First Place: Kameron Walker
Second Place: Emmalee Milner
Third Place: Rachel Perez

O.I. Snapp Award (Non-student oral presentation)

Winner: Phillip Roberts

Photo Salon Winners
Georgia Entomological Society Annual Meeting
April 10-12, 2019. Lake Blackshear Resort, Cordele, GA

Biology Category:

First Place: Ed Mondor
Second Place: Pin-Chu Lai
Third Place: Brett Blaauw

Microscope Category:

First Place: Apurba Barman

Portrait Category:

First Place: Apurba Barman
Second Place: Ed Mondor
Third Place: Jason Chen

Sequence Category:

First Place: Stacey Vigil

Sturgis McKeever Award Best of Show Winner: Apurba Barman

Peoples' Choice Award: Brett Blaauw

Georgia Entomological Society Arthropod Survey

2018

2018 Georgia Entomological Society

Arthropod Survey

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Contributors: Mark Abney (peanut), Angelita Acebes (pecan), G. David Buntin (corn, sorghum, wheat), Nancy Hinkle (livestock, poultry and pets), William Hudson (pecan), Brett Blaauw (apple, peach), David Riley (vegetables), Phillip Roberts (cotton, soybean), Ash Sial (blueberry), Alton Sparks (vegetables), Daniel Suiter (urban and structural)

Apple

Apple insect and mite IPM in GA has been and continues to be quite stable. In most GA apple orchards insecticide applications timed by temperature-driven developmental models still provide excellent control of codling moth (*Cydia pomonella*), Oriental fruit moth (*Grapholita molesta*), and tufted apple budmoth (*Platynota idaeusalis*) our key complex of fruit feeding lepidopterans. That said, significant GA apple acreage exhibits signs of resistance to phosmet (Imidan), methoxyfenozide (Intrepid) and/or novaluron (Rimon). Fortunately, orchards experiencing declining insecticide performance continue to get good to excellent codling moth and Oriental fruit moth control with pheromonal mating disruption.

A potential new pest(s) for the region is a complex of ambrosia beetles (subfamily Scolytinae). These small beetles excavate tunnels in stressed trees and inoculate the bored-out galleries with a fungus. The resulting injury, fungal infection, and secondary infections can rapidly kill trees. Such injury has been observed in surrounding states, such as North Carolina, and also at a few North GA orchards in 2018. Thus, season-long activity will be monitored in North GA orchards in 2019 to better understand the incidence of this pest. Management for these beetles is minimally effective and relies on trunk sprays with chlorpyrifos, painting trunks with diluted white latex paint, and/or removal of already infested trees, but keeping trees healthy and happy is really our best strategy.

The relatively new invasive brown marmorated stink bug (*Halyomorpha halys*) is readily observed in GA's mountain counties, but to date has not been a significant pest in northern apple or peach production.

Blueberry

Spotted-wing drosophila (SWD) remains to be the key pest of blueberries in Georgia. The majority of the growers followed management programs developed by the UGA Blueberry Entomology program and didn't experience any issues related to SWD infestation in their fruit. However, a few growers who weren't able to implement SWD management programs in a timely manner reported issues with SWD infestations in their fruit. Consequently, crop losses due to SWD infestations were very low. Overall, SWD management costs ranged from \$100-150 per acre.

Over the last couple of years, we have seen a significant increase in secondary pest problems likely due to multiple applications of broad-spectrum insecticides (OPs and pyrethroids) to control SWD. During 2018, gall midge, thrips, and scales were reported to be the major concerns. Other insect pests reported during 2018 included bud mites, cherry fruit worm, cranberry fruit worm, leafhoppers, bearberry whiteflies, and ground pearls. Statewide, a significant proportion of the blueberry acreage was treated with 1-3 insecticide applications to control these secondary insect pests.

Furthermore, a number of frost events during March 2018 caused significant damage to blueberry blooms. As a result, Georgia blueberry growers lost about 45-50% of the crop during 2018.

Corn

Corn acreage in Georgia was 325,000 acres planted and 285,000 acres harvested which was more than 2017. Growing conditions generally were cooler and wetter than normal. Average grain yield was 176 bu/acre, which was greater than the year before, but many irrigated fields yielded 250-300 bu/acre. Average corn grain price received was \$4.47 per bushel. An additional 30,000 acres were harvested as silage with a yield of 21 tons per acre. All corn seed is treated with a neonicotinoid insecticide, so soil insect damage was very low. Stink bug infestations were low to moderate in 2017 in most areas,

although preventive sprays were still used widely. Fall armyworm infestations were low in on-time planted corn. Fall armyworm whorl infestations were severe in non-Bt corn in later planting. Corn earworm infestations were low to moderate in on-time planted corn, but increased to damaging levels in late-planted corn. Bt corn adoption is about 80% in the state. Cost of Bt technology was about \$16 to \$28 per acre depending on trait package. Bt products continue to provide very good control of stalk borer and fall armyworms in the whorl. More unexpected ear/kernel damage by corn earworm was observed in late planted Bt corn than a few years earlier suggesting that field-evolved resistance is occurring in some Bt trait products in Georgia. Studies in 2017 and 2018 indicate resistance in corn earworm populations to the Cry1A genes is now widespread in the southern U.S.

Cotton

The 2018 production year will be remembered as the year of the Hurricane Michael. Cotton yield forecasts were excellent as we entered October, perhaps a record breaking crop. However Hurricane Michael devastated the cotton crop with total losses estimated at over \$600 million. Cotton was planted on 1.43 million acres but only 1.35 million acres were harvested. Yield on harvested acres was only 693 lbs. lint/acre. Average insecticide applications were 2.4 per acre, average yield loss due to insects was 3.0 percent, and the total costs associated with insect pests (losses plus control costs) were \$83.31 per acre.

Moderate thrips infestations were observed on cotton planted in April followed by unusually low thrips infestations on cotton planted in May and June. Due to low populations, neonic seed treatments provided acceptable control, and relatively few foliar insecticide applications were needed to supplement at-plant treatments.

Tarnished plant bugs infested 55 percent of Georgia cotton, and 12 percent of the acres were treated for this pest. We continue to see a trend for increased numbers of tarnished plant bugs in cotton. Insecticide applications targeting plant bugs disrupt beneficial insects and have the potential to flare secondary pests. Although cotton aphid rarely causes economic loss, approximately 20 percent of acres were treated for cotton aphid. During the fall of 2018 a cotton virus which is vectored by cotton aphid was detected in multiple Georgia cotton producing counties. Only 1 percent of the cotton acreage was treated for spider mites.

Nearly all cotton planted in Georgia is Bt cotton. We continue to have concerns regarding corn earworm in Georgia and the Cotton Belt as a whole with decreased efficacy and resistance development to some Bt toxins. Lab bioassay data from corn earworm collected during 2018 indicated susceptibility of Cry 1Ac and Cry 2Ab toxins has eroded in corn earworm populations. In spite of these concerns, only 4 percent of the acreage was treated for corn earworm due to low corn earworm populations infesting cotton. Stink bugs continue to be the most common insect requiring treatment. Approximately 80 percent of acres were treated for stink bugs; averaging 1.2 applications per acre.

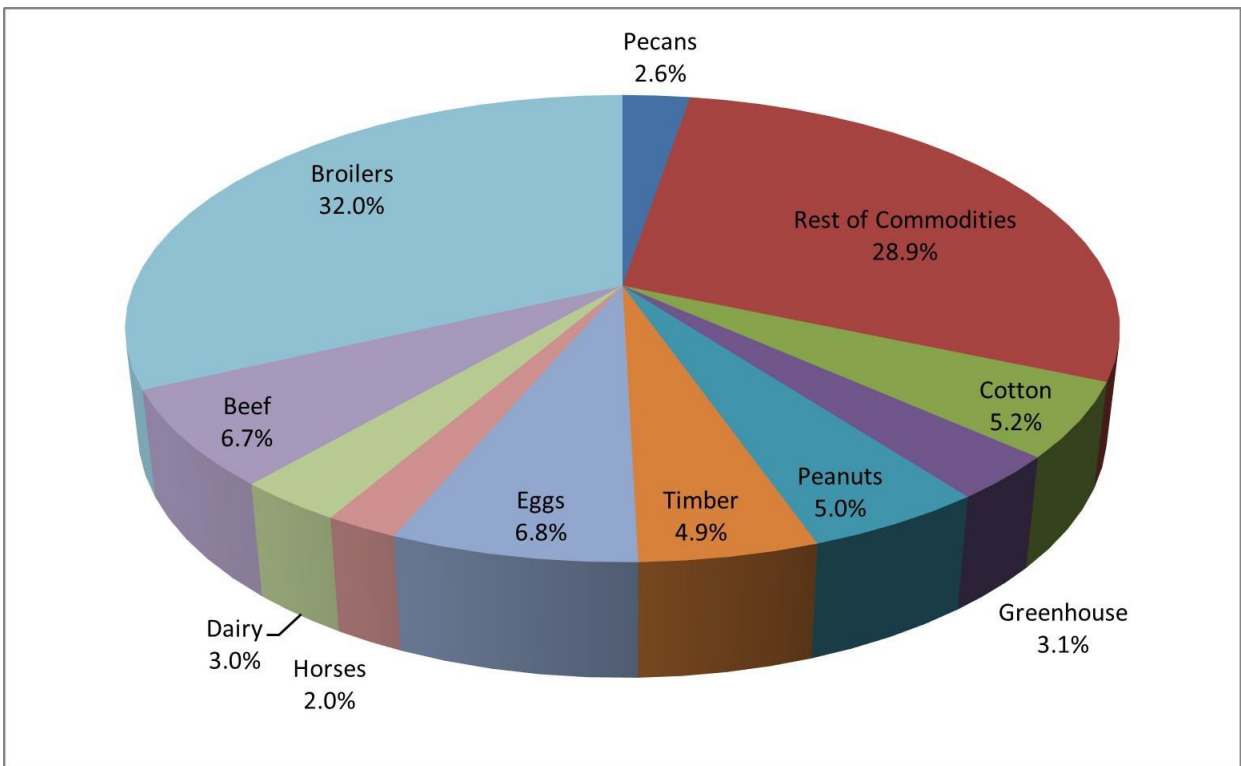
An outbreak of silverleaf whitefly (SLWF) occurred during 2017 causing significant yield loss and additional control costs. During 2018 SLWF populations were generally low, due in part to cold winter temperatures and a wet spring and summer which are not conducive for SLWF population survival and

development. Growers were also more aware of SLWF and employed management strategies such as natural enemy conservation to reduce the risk of SLWF. About 2 percent of the cotton acres were treated for SLWF during 2018 compared with over 80 percent during 2017. We continue to monitor and learn about SLWF population dynamics in the South Georgia farmscape.

Livestock, Poultry, and Pets

Among Georgia’s Top 10 agricultural commodities, five are animal agriculture – broilers, laying hens, beef cattle, dairy cattle, and horses. Combined, the farm gate value of these five commodities totals over half the state’s entire agricultural farm gate income, illustrating the significance of animal agriculture in the state.

Georgia Top Ten Agricultural Commodities



Beef Cattle

Georgia ranks 21st nationally in cattle production, with about a million head produced annually, amounting to a farm gate value of over a billion dollars. Horn flies (*Haematobia irritans*) are the main pest of pastured cattle, causing cattle irritation and aggravation by their blood-feeding habit. More significantly, the cow’s avoidance behaviors disrupt calf nursing, meaning calf weaning weights may be reduced by 18 pounds per calf compared with calves on mother cows with good horn fly control. Statewide, annual losses to horn flies on Georgia cow-calf operations are over \$14 million. Horn fly suppression is dependent on insecticides, although due to insecticide resistance there are few options that effectively reduce horn fly numbers for more than a few days. Stable flies, the other bloodsucking

fly attacking cattle, account for over \$15 million in losses for Georgia cattle herds. To control horn flies and stable flies (as well as other ectoparasites such as face flies, lice, etc.), Georgia cattlemen invest ca. \$5.9 million annually.

Broilers

Georgia continues to be the nation's number 1 broiler producing state. Broilers rank at the top of Georgia's agricultural commodities, bringing in \$4.4 billion annually, or 32% of the state's farm gate value.

Worldwide, darkling beetles (*Alphitobius diaperinus*), whose larvae are known as lesser mealworms, are the primary pest of broiler production. These insects burrow into insulation to pupate, damaging facilities and lowering insulative capacity. Costs of heating during winter and cooling houses in summer significantly increase production costs. When litter is removed and applied to pastures or fields as soil amendment, beetles are distributed and may migrate to nearby homes, creating neighborhood friction. Lesser mealworms feed on dead birds and feces, thereby acquiring numerous pathogens which they can transfer to uninfected birds when consumed. They also maintain Salmonella in their guts during pupation, so that newly emerged adult beetles are infectious to chickens. Chickens are predators and prone to eating insects; filling their digestive tracts with indigestible beetles prevents their consuming nutritious feed and gaining weight, as meat birds are intended to do. *Alphitobius* populations worldwide have been shown resistant to most of the pesticides registered for their suppression, so management strategies are extremely limited. Suppression efforts have some effect on beetle numbers, but there are no tactics that significantly reduce beetle populations.

All 13,000 Georgia broiler houses are infested with darkling beetles, and broiler producers spend approximately \$11 million annually for *Alphitobius* suppression. Statewide, losses to the beetles are estimated at \$4.6 million annually, for lost production and control costs totaling ca. \$15.6 million annually in the state. Again, even the most conscientious and strategic intervention strategy is ineffective at suppressing *Alphitobius* beetles with current products and technology.

Caged Layers

Table eggs are Georgia's third most lucrative commodity, with an annual value to the state of over \$851 million (ranking Georgia 6th nationally). The principal pest in caged layer houses is the house fly (*Musca domestica*), which causes spotting of eggs, degradation of equipment through fecal contamination, and neighborhood consternation when flies migrate away from the poultry farm to nearby residences. Because of suitable conditions inside layer houses, house flies can be a year-round problem. Producers use manure and water management, trapping, biological control (fly parasitoids and predators), and various pesticides to suppress house flies around caged layer operations. Worldwide, house flies have been shown resistant to most insecticides, so control is seldom adequate. Losses due to flies combined with costs of management are estimated to total over \$7 million annually.

Northern fowl mites (*Ornithonyssus sylviarum*) are the second most significant pest in layer flocks. These mites are bloodsuckers that spend their entire life cycle on the chicken host, causing itching, scabbing, anemia, and general bird discomfort and lack of thriftiness. Losses due to reduced feed conversion efficiency and reduced egg production are estimated at \$1.8 million annually, while

suppression costs (primarily acaricides) are about \$1.7 million per year, totally \$3.5 million statewide annually.

Pets

Approximately 2.5 million Georgia households have dogs and cats. The three major arthropod pests affecting pets are fleas, ticks, and mosquitoes. Because fleas transmit tapeworms, ticks transmit pathogens such as *Ehrlichia*, and mosquitoes carry heartworm, pest suppression is essential for disease prevention and to maintain pet health. In Georgia, expenditures for ectoparasite control on dogs and cats amount to over \$128 million annually.

Peach

Pest pressure from fruit-attacking insect pests, such as plum curculio (*Conotrachelus nenuphar*), Oriental fruit moth (*Grapholita molesta*), assorted stink bugs, and green June beetles in peach orchards across GA & SC was light to moderate in 2018, in part due to the substantial crop loss in the previous year (due to freeze damage) across the Southeast. Premature tree decline associated with scale, lesser peachtree borer, and peachtree borer continues to cause serious losses. Cover sprays do little to control/suppress these key tree pests. Scale insects, such as San Jose scale (*Comstockaspis perniciosus*) in particular, are increasingly damaging. Scale control is very demanding but doable with rigorous application of dormant oils followed by block-specific responses with an insect growth regulator application for scale outbreaks through October. Regardless, every orchard needs to receive two dormant, dilute oil applications each year. Growers that apply their dormant oil applications at higher volumes, 150-175 gal/acre, are seeing improved scale management, but not complete control.

Lesser peachtree borer (*Synanthedon pictipes*) control is stable where dilute, pre-bloom chlorpyrifos sprays are complimented by in-season cover sprays and a post-harvest application of chlorpyrifos. Peachtree borer (*Synanthedon exitiosa*) infestations are worsening. Peachtree borer populations (univoltine) are showing the same upward population trends previously seen with the multivoltine lesser peachtree borer. Mating disruption utilizing the female sex pheromone of lesser peachtree borer is a highly effective management strategy in the Mid-Atlantic and Upper Mid-Western peach production areas, but this technology has previously failed with the higher pest abundance and longer, warmer growing seasons of the Southeast. Cottrell et al. at the USDA-ARS have worked for years to adapt mating disruption to the Southeastern lesser peachtree borer and peachtree borer complex. As such, the Southeastern-formulated mating disruption pheromone, Isomate-LPTB Plus, was registered for use in Georgia and South Carolina for the 2018 season, and deployed on approximately 3,000 acres.

The abundance of the invasive brown marmorated stink bugs (*Halyomorpha halys*) was observed to be increasing in Fort Valley, the key peach growing region of GA. Population numbers were highest post-harvest and there was no reported crop loss/injury due to this pest. The brown marmorated stink bug will continue to be monitored in 2019 in GA peaches.

Peanut

Georgia's statewide average peanut yield in 2018 was 4450 pounds per acre on 650,000 harvested acres. Above average rainfall was generally favorable for high yields but also led to widespread rootworm (southern corn rootworm and banded cucumber beetle) infestations. Damage from these pests was reported from areas with historically high populations (heavy clay soils) but also from fields with lighter, sandier soils where rootworm is not typically found. According to tonnage reports, the

proportion of the Georgia crop graded segregation 2 (damaged) was low in 2018, so rootworm injury did not have a direct negative effect on crop quality. Rootworm impact on yield is unknown.

Populations of other pest arthropods were generally low and manageable. Lesser cornstalk borer and twospotted spider mite thrive in hot, dry conditions, and neither were abundant in peanut. None of the foliage feeding caterpillars reached outbreak status in 2018. Caterpillar populations reached thresholds in some fields, but growers had no problem managing them with available insecticides. Garden fleahopper was present across a large portion of the crop. This insect has become common in peanut in recent years, though its pest status is unclear. Insecticide efficacy trials show that pyrethroids are not effective against garden fleahopper in peanut; acephate and imidacloprid applications result in significant reduction in pest density. Thrips and threecornered alfalfa hoppers are present in nearly every peanut field in Georgia every year. Populations of these insects in the 2018 crop were similar to previous years.

The organophosphate insecticide chlorpyrifos continued to face regulatory challenges in 2018. The US Court of Appeals for the 9th Circuit instructed the US EPA to revoke all tolerances for the active ingredient. Chlorpyrifos is currently the only insecticide with proven efficacy against peanut burrower bug and southern corn rootworm in peanut. As of March 2019, tolerances remained in effect, and the product was legal to use on registered crops.

Pecan

Overall, the arthropod pest situation for pecans in Georgia was normal apart from sporadic outbreaks of minor pests (e.g., pecan leaf phylloxera and fall webworm). In the Spring of 2018, there were reports of ambrosia beetle infestations in young orchards but tree loss was minimal. Pecan leaf phylloxera outbreaks were reported by some growers in early summer. Fall webworm infestations were unusually high in several pecan orchards in 2018. The most common pests that growers treated were yellow aphids, blackmargined aphids and black pecan aphids, requiring 1-3 sprays throughout the season. Apart from these pests, growers also reported spraying for pecan leaf scorch mites, nut casebearers, shuckworms, pecan weevils, phylloxera, fall webworm and stink bugs.

Perhaps the major loss suffered by the pecan industry in 2018 was due to hurricane Michael, and many growers, particularly in southwest Georgia, were not able to harvest their crops. For the 2018 production, there was an estimated \$100M crop loss attributed to hurricane Michael. Additionally, ~27,500 acres of pecan trees (17% of the state's pecan acreage) were lost due to the hurricane. This translates to \$260M tree loss and future income loss of \$200M.

Sorghum

Sorghum acreage in 2018 was 15,000 acres for grain production and 8,000 acres for forage/silage production. Grain yield averaged 53 bu/acre. Price received is not available for 2018 but averaged \$7.96 per 100 lb seed in 2017. Acreage was lower than 2016 due to lower commodity prices and cost of controlling the sugarcane aphid (SCA). SCA infestations were first detected in late April in southern GA and throughout the state by the end of June. SCA occurred on about every acre of sorghum. Virtually all grain sorghum hybrids were pretreated with the neonicotinoid insecticides clothianidin, thiamethoxam

or imidacloprid which provided good control for SCA for 30-35 days after planting. A Section 18 emergency use exemption was obtained again for use of Transform WG on sorghum for SCA control with a maximum of two applications per season. Almost all acres were treated once and some fields were treated twice with either Sivanto prime 200SL or Transform WG. Estimated cost of insecticide application for sugarcane aphid control was about \$15 to \$20 per acre. Some fields or portions of fields were severely damaged and abandoned. Sorghum midge infestations were absent or very low. Some later planted fields were treated for fall armyworm in the whorl or headworms (fall armyworm, corn earworm and/or sorghum webworm) on the grain heads. Control of SCA in silage and forage sorghum is problematic. About 105 acres of sweet sorghum is grown in Georgia for syrup production with a retail value of about \$5,000 per acre. A Section 18 label also was obtained for Sivanto prime for use on sweet sorghum for syrup production, which prevented severe damage in most sweet sorghum fields in 2018.

Soybean

Insect pest problems in soybean were relatively minor during 2018. Foliage feeding caterpillars, including soybean looper and velvetbean caterpillar, and stink bugs were the most common pests infesting fields and requiring treatment. Soybeans were planted on 145,000 acres during 2018. An average yield of 40 bushels per acre was achieved on 135,000 harvested acres. Average insecticide application was 1.2, average yield loss was 4.4 percent, and the total cost associated with insect pests (losses plus control costs) was \$28.49 per acre.

Urban and Structural

The tawny crazy ant, *Nylanderia fulva*, has shown up in Dougherty and Lee counties (Albany, GA) in August 2013, Camden and Glynn counties along I-95 exits coming from Florida (August 2014), and Chatham (Garden City, GA), Lowndes (Valdosta, GA), and Brooks (Quitman, GA) Counties in 2015. There have been no detections in Georgia since. Our belief is that this major nuisance ant pest will be restricted to the lower half to one-third of GA and coastal GA. In our studies in Chatham County, at the Port of Savannah, we are seeing the rapid displacement of the red imported fire ant, *Solenopsis invicta*, by *N. fulva*. Control of *N. fulva* is much like that for the Argentine ant, *Linepithema humile*. Fipronil (Termidor SC) used close to the structure only and applied directly to trailing ants is the best method to date, to control *N. fulva*. Elimination of excessive trash and debris is also critical, as it eliminates nesting sites.

Several changes to insecticide labels (pyrethroids and neonicotinoids) have occurred over the past several years. For pyrethroids, changes (in OTC and professional markets) restrict where products can be applied. To prevent water contamination, for instance, they cannot be applied to hard surfaces, cannot be applied more than 3 feet high, must be applied crack and crevice, and must be applied over overhangs when applied to soil. For neonicotinoids, new labels have a pollinator protection box with language mandating that products not be applied to plants with flowers on them.

Although bed bug problems continue to be common in Georgia (mainly in commercial accounts), many companies (including some large ones) not equipped to handle them (multiple visits and labor intensive), or averse to the liability, are not pursuing bed bug work. Although bed bugs garner lots of attention, termites and ants are still more profitable for most companies, especially those small to mid-sized companies which make up more than three-fourths of the industry (Suiter's estimate). On the pest control side, ants (Argentine ants) are arguably the number one pest encountered by companies who conduct residential pest control (most of them) in GA. A major problem that has emerged for those

people who have been unfortunate enough to have found themselves with a bed bug infestation is the cost to remedy the problem. The cost of a bed bug treatment, over the past decade, has reached the cost of a residential termite treatment. And many residents, especially those living in low-income environments, are simply not fortunate enough to be able to afford to hire a pest management company to solve their problem. This, coupled with virtually no over-the-counter remedies, is fueling the search for low-cost, effective remedies available to homeowners.

Attractants for bed bug traps is an active area of research. The "ClimbUp" pitfall trap continues to be the industry standard for traps as monitors. Traps are not used as a pest control tool, but are good monitors. Heat continues to be used to control bed bugs, mainly as an alternative to pyrethroid resistant populations; pyrethroid resistance in bed bugs is severe and widespread. There are few chemicals on the horizon that will alleviate this situation; however, chlorfenapyr (Phantom, BASF) is a fairly widely incorporated residual, as is silica gel and diatomaceous earth (Cimexa dust and Mother Earth dust). Essential oils are being looked at, but are not promising. Heat, when used improperly, can worsen bed bug problems by driving bugs from heated premises. Dogs as inspection tools are variable when it comes to efficiency; the handler has proven to be a key to the success of dogs as inspectors. Information about bed bugs, in the form of webinar archives, can be viewed at www.gtbop.com. Viewing is free.

Persons holding a Commercial and/or Private Pesticide Applicators license may acquire category credits (CEUs), for most categories, through their local county extension agent. Although pest management professionals are exempt from acquiring HPC and WDO credits, they may acquire Category 41 (Mosquito) hours in this manner. Licensees should contact their county extension office by calling 1-800-ASK-UGA1 to arrange for viewing one or more for-credit recordings. In short, recordings must be watched in the presence of a county extension agent or their designee. This will require the licensee to travel to the county agent's office. The licensee will sign an Agent-produced sign in sheet (downloaded from gtbop.com), pay the agent, watch the recording, and get a copy of the sign in sheet from the agent. The Agent scans and emails the sign in sheet to the Center for Urban Agriculture at gtbop.com. The Center adds information to the sheet and sends it to the Georgia Department of Agriculture for credit assignment.

Vegetables

Spring crops were produced with greater insect pest pressure than 2017, but still relatively minor. Thrips were light in onions. Diamondback moth were more broadly distributed and presented severe control issues because of resistance to multiple insecticide modes of action. Other caterpillar pests were relatively light in most crops. Thrips densities were high in multiple crops but occurred later in the spring.

Production of summer and fall crops presented multiple severe pest problems in vegetables.

The cowpea curculio remains as a crop-threatening pest in cowpeas. No legal control methods that will provide adequate control have been identified.

Silverleaf whitefly and associated viruses occurred later in 2018, with a more "normal" distribution (as compared to 2017). Growers in the Tift and Colquitt Counties area were most severely impacted; later planted squash and snap beans experienced the greatest losses. The hurricane (Michael) reduced issues with whitefly, but decimated many of the crops.

Pepper weevil was of major concern in 2018. Pheromone trap data indicated that weevil adults overwintered in southern Georgia, necessitating extensive insecticide inputs by pepper growers to manage this pest. Growers appeared to be successful in the spring crop with few control issues reported; however, isolated incidence of severe problems were reported in the fall. These problems were generally attributed to inadequate management measures.

Sweetpotato growers have reported inadequate control of soil insects, primarily wireworms, with their management programs. While Georgia did obtain a 24C registration to allow for chlorpyrifos PPI application with a 60 day PHI (previous 120), this product is under court order to be eliminated.

Wheat

Harvest wheat acreage in 2018 was about 200,000 acres planted and 70,000 acres harvested with average statewide yield of 54 bu/acre at \$4.10/bu. Acreage was lower than previous years due to poor conditions at planting time and low commodity prices, and harvested acreage was lower due to wet weather at harvest. Nevertheless, some farmers harvested 80-100 bu/acre if the crop was harvested in mid-May before an extended rainy period in late May and June. Resistant varieties continue to be the main line of defense against the Hessian fly. Some fields of susceptible varieties had significant Hessian fly damage in the spring. Aphids and barley/cereal yellow dwarf disease levels were generally low to moderate in the coastal plain region but caused some damage in northern Georgia. Cereal leaf beetle infestations were low but some fields were treated in east-central Georgia. Scab disease was a major concern but was not as severe as the previous season.

2019 Annual Meeting Registrations								
Regular members:			Regular Members (on-site):			Student:		
Abney	Mark	1	Guillibeau	Paul	1	Bishop	Crystal	1
Acebes	Angel	2	Horton	Dan	2	Bosworth	Alan	2
Ames	Lisa	3	Young	Herb	3	Bowers	Carson	3
Arabuli	Tea	4			4	Cassell	Katie	4
Barman	Apurba	5			5	Catto	Michael	5
Blaauw	Brett	6			6	Chen	Jason	6
Buntin	David	7				Chen	Yi-Ju	7
Carter	Wen	8				Cobb	Bonnie	8
Cottrell	Ted	9				Cylkowski	Zoe (Ren)	9
Croxton	Scott	10	Student (on-site):			Dial	Dustin	10
Diffie	Stan	11			2	Dunn	Thomas	11
Durden	Lance	12			3	Follman	Tyler	12
Gibson	Josh	13			4	Gautam	Saurabh	13
Harris-Shu	Karen	14			5	Gireesh	Midhula	14
Heim	Craig	15			6	Grant	Joshua	15
Highland	Brett	16				Hobby	Sarah	16
Hinkle	Nancy	17				Hunter	Jamal	17
Holden	James	18				Johnston	Samuel	18
Hofman	Camila	19				King	Sierra	19
Horn	Scott	20	Emeritus/Fellows/Retired:			Lai	PinChu	20
Hudson	Will	21	Braman	Kris	1	Liu	Jean	21
Ingram	Hardie	22	French	Frank	2	Masters	Jillian	22
Joseph	Shimat	23	Gardner	Wayne	3	McDonoug	Katie	23
Knoll	Joe	24	Griffith	Keith	4	Milner	Emmalee	24
LaForest	Joe	25	Hagan	Dan	5	Monterrosa	Alejandra	25
Lampert	Evan	26			6	O'Connell	Daniel	26
Mondor	Ed	27			7	Patel	Dilani	27
Newark	Mason	28			8	Perez	Lauren	28
O'Brien	Jennifer	29			9	Perez	Rachel	29
O'Shields	Katie	30				Randell	Taylor	30
Punnuri	Somashekhar	31	Invited Speakers:			Singh	Gurjit	31
Richburg	John	32	Harrison	Scott	1	Slater	Elizabeth	32
Riley	David	33				Slusher	Kyle	33
Roberts	Phillip	34				Sparks	Tanner	34
Rucker	Keith	35				Sturges	Lucia	35
Russell	Scott	36				Tunckol	Ihsan	36
Sanders	Hunt	37	Spouse Registration:			Turner	Charles	37
Schmidt	Jason	38	Braman	George	2	Walker	Kameron	38
Shapiro-Ila	David	39	Hagan	Miriam	3	Weredyk	Ryan	39
Sheehan	Thomas	40	Tremblay	Michelle	4	Wernick	Ari	40
Sial	Ash	41	French	Eileen	5	Young	Kelsea	41
Skipper	April	42			6			
Smyth	Linda	43			7			
Sparks	Stormy	44			8			
Srinivasan	Babu	45			9			
Suiter	Dan	46						
Taylor	Mickey	47						
Thompson	Melissa	48						
Tietjen	Bill	49						
Toews	Mike	50						
Vigil	Stacey	51						
Wu	Shaohui	52						
Yellin	Anna	53						

Georgia Entomological Society
2019 Annual Meeting Financial Report

The 83rd Annual Meeting held at Lake Blackshear Resort, Cordele, Georgia.

GES Meeting Financial Report (04/16/19):

Income

Industry Support	\$1,800.00
Registration	
Full (53 at \$150)	7,950.00
Emeritus (5 at \$75)	375.00
Student (40 at \$25)	1000.00
Spouses (3 at \$25)	75.00
T-shirts and Silent Auction	938.00
Total Income	\$12,138.00

Expenses

Lake Blackshear	\$6040.22
Programs	578.10
Plaques	673.95
Awards	950.00
Scholarships	1000.00
Meeting supplies	
T-shirts	564.50
Total Expenses	\$9806.97

Income - expenses \$2331.03

**MEMBERSHIP OF THE
GEORGIA ENTOMOLOGICAL
SOCIETY**

Abney	Mark	regular	Diffie	Stan	regular
Acebes	Angelita	regular	Disi	Joseph	regular
All	John	regular	Douce	Keith	regular
Allen	Clint	regular	Dunn	Thomas	student
Ames	Lisa	regular	Durden	Lance	regular
Anderson	Matthew	student	Dutcher	Jim	regular
Anes	Christian	student	Eger	Joe	regular
Arabuli	Tea	regular	Eremeeva	Marina	regular
Avery	Pasco Bruce	regular	Evans	Mike	regular
Barding	Erin	regular	Evans	Richard	student
Barman	Apurba	regular	Fair	Coner	student
Barwick	Sydni	student	Faircloth	Wilson	regular
Batzer	Darold	regular	Fang	Quentin	regular
Beati- Ziegler	Lorenza	regular	Farrar	Robert	regular
Bell	Richard	regular	Fettig	Christopher	regular
Benton	Elizabeth	regular	Flanders	Kathy	regular
Bishop	Crystal	student	Fleming	James	student
Blaauw	Brett	regular	Follman	Tyler	student
Blackmore	Mark	regular	Forsman	Stephanie	student
Blount	Joni	regular	Fowler	Caroline	student
Bostick	Nan	student	Frank	Daniel	regular
Bosworth	Alan	student	French	Frank	emeritus
Bowers	Carson	student	French	Ned	regular
Braman	Charles	student	Fulmer	Abraham	regular
Braman	Kris	emeritus	Gardner	Wayne	regular
Brinkman	Mark	regular	Gautam	Saurabh	student
Brown	Ian	regular	Gibson	Joshua	regular
Bundy	Scott	regular	Gireesh	Midhula	student
Buntin	G. David	regular	Gochmour	Benjamin	regular
Burns	Shuntele	regular	Grant	Joshua	student
Carter	Wen	regular	Green	Clarence	student
Cassell	Katie	student	Greene	Jeremy	regular
Catto	Michael	student	Griffin	Rebecca	student
Chen	Jason	student	Griffith	Keith	emeritus
Chen	Yi-an	student	Guillibeau	Paul	regular
Chen	Yi-Ju	student	Haar	Phillip	student
Clark	Brittany	student	Hadden	James	regular
Cobb	Bonnie	student	Hadden	Whitney	student
Conway	Hugh	regular	Hagan	Daniel	emeritus
Cook	Don	regular	Hamilton	Fredericka	student
Corkern	Chris		Harris	Bethany	regular
Cottrell	Ted	regular	Harrison	Ron	regular
Croxton	Scott	regular	Harris-Shultz	Karen	regular
Cylkowski	Zoe	student	Harty	Tom	student
Dial	Dustin	student	Headings	Mark	regular

Heim	Craig	regular	Ludwig	Scott	regular
Heiney	Abigail	student	Mangini	Alex	regular
Higashi	Clesson	student	Masters	Jillian	student
Highland	Brett	regular	McCollum	Sandra	regular
Hinkle	Nancy	regular	McCoy	Evan	student
Hix	Raymond	regular	McCravy	Kenneth	regular
Hobby	Sarah	student	McDonough	Katie	student
Hofman	Camila	regular	McElrath	Tommy	student
Holbrook	Tate	regular	McHugh	Joseph	regular
Holden	James	regular	McNichol	Bailey	student
Horn	Scott	regular	Miller	Dan	regular
Horton	Dan	regular	Milner	Emmalee	student
Hudson	William	regular	Mitchell	Paula	regular
Huffman	Evan	student	Mizell	Russ	regular
Hunter	Jamal	student	Mondor	Edward	regular
Hutchison	William	regular	Monterrosa	Alejandra	student
Ingram	Hardie	regular	Munro	Holly	student
Irby	William	regular	Murray	Kelly	student
Johnson	Allison	student	Nesbitt	Keonka	student
Johnson	DeAndre	student	Newark	Mason	regular
Johnson	Lkeira	regular	Newell	Sanford	regular
Johnston	Samuel	student	Ni	Xinzhi	regular
Joseph	Shimat	regular	Noblet	Ray	regular
Kahn	Fawad	student	O'Brien	Jennifer	regular
Kay	Sasha	regular	O'Connell	Daniel	student
Keefer	Tony	regular	Ogunleke	Titilupe	student
Kelly	Rosmarie	regular	Oi	David	regular
Kim	Sang Soo	regular	Oliver	Jason	regular
King	Sierra	student	Oliver	Kerry	regular
Kitching	Harley	student	Osbrink	Weste	regular
Knight	Emily	student	Owens	Clay	regular
Knoll	Joe	regular	Patel	Dilani	student
Kollars	Thomas	regular	Perez	Lauren	student
Kuhar	Tom	regular	Perez	Rachel	student
LaForest	Joe	regular	Peterson	Lance	emeritus
Lago	Paul	regular	Pfannenstiel	Robert	regular
Lahiri	Sriyanka	regular	Phelan	Brent	student
Lai	PinChu	student	Pilkay	Grant	regular
Lampert	Evan	regular	Pitts	Daniel	regular
Layton	Blake	regular	Podgwaite	John	regular
Lee	Cathy	regular	Poole	Emilee	student
Legarra	Saioa	regular	Portier	Trey	student
Li	Zhaolong	regular	Punnuri	Somashekhar	regular
Little	Brian	regular	Randell	Taylor	student
Liu	Tzu-Chin	student	Reding	Michael	regular

Reeves	Benjamin	student	Tillman	Glynn	regular
Rich	Annie	student	Toews	Michael	regular
Richburg	John	regular	Torrance	Phillip	student
Ridland	Peter	regular	Tremblay	Michelle	spouse
Riffle	Michael	regular	Tunckol	Ihsan	student
Riley	David	regular	Turner	Charles	student
Ringler- Lanzy	Matthew	student	Vigil	Stacey	regular
Roberts	Phillip	regular	Vogt	James	regular
Royal	Stanley	regular	Walker	Kameron	student
Rucker	Keith	regular	Walker	Max	emeritus
Russell	Scott	regular	Wedincamp	Jimmy	regular
Sanders	Hunt	regular	Weredyk	Ryan	student
Schmidt	Jason	regular	Wernick	Ari	student
Scocco- Niland	Erika	regular	Westberry Whitehous e	Lisa	regular
Seiter	Nicholas	student	Whitney	Tyler	student
Semtner	Paul	emeritus	Wu	Thomas	student
Shapiro-Ilan	David	regular	Xavier	Shaohui	regular
Sheehan	Tom	regular	Yacoub	Shereen	student
Shockley	Marianne	regular	Yellin	Cindy	student
Sial	Ashfaq	regular	Young	Anna	regular
Simmons	Alvin	regular	Young	Herb	regular
Simmons	Breana	regular	Young	Kelsea	student
Singh	Gurjit	student	Young	Orrey	emeritus
Skipper	April	regular	Zhang	Yanzhuo	regular
Slater	Elizabeth	student			
Slusher	Eddie	student			
Smith	David	emeritus			
Smith	Margaret	regular			
Smith	Ron	emeritus			
Smyth	Linda	emeritus			
Sokol	Leora	student			
Sparks	Alton, Jr.	regular			
Sparks	Tanner	regular			
Spaulding	Nathan	student			
Spurgeon	Dale	regular			
Srinivasan	Babu	regular			
Sturges	Lucia	student			
Suiter	Dan	regular			
Sutherland	Bryce	student			
Swain	Hilary	regular			
Taylor	Mickey	regular			
Thompson	Austin	student			
Thompson	Lynne	emeritus			
Thompson	Melissa	regular			
Tietjen	William	emeritus			