

Minutes of the 2015 Annual Meeting of the Georgia Entomological Society

Executive Committee Meeting Minutes

April 08, 2015. Villas by the Sea, Jekyll Island, GA

Attending: Scott Horn (President), Stan Diffie (Secretary-Treasurer), Will Hudson (President-Elect), Marianne Shockley (2016 Site Selection), Ed Mondor (Local Arrangements), Wayne Gardner (JES), and Nancy Hinkle (Historian).

Operating Guidelines (Scott Horn) – Due to the extensive work on the Guidelines in 2014, there was nothing to report for 2015.

Awards & Recognition (Scott Horn on behalf of David Riley) –The committee selected Jim Hanula as the 2015 Fellow and Jim Dutcher as the Founder. Will Hudson will present the Founder’s Lecture, and Michael Ulyshen will introduce the Fellow. Plaques will be presented to Jim Hanula, Jim Dutcher, and Will Hudson following the lecture.

Membership and Computer Resources Committee (Scott Horn on behalf of Jim Hanula)—the committee has not been very active lately because the Secretary/Treasurer handles all of the duties under normal operating circumstances. Scott asked if we should possibly entertain a motion at the final business meeting to dissolve this committee until further notice. After some discussion concerning when to remove non-paying members and how to determine students’ eligibility, the executive committee decided to keep the membership committee. Due to the cost of distributing the journal quarterly, it was decided to drop members after one year of unpaid dues. Of the 290 members currently on the roll, 49% paid dues or attended the meeting in 2014. The membership year will run from one annual meeting to the next.

Insect Survey Committee (Scott Horn on behalf of Mark Abney)—Phillip Roberts stepped down as chair of the committee and Mark Abney volunteered to step up as chair. The survey had dwindled in the past few years so Mark has agreed to take a fresh look at the expectations and objectives of the survey. The current issue is six pages in length. Discussion followed as to the best method of dissemination: GES website, publish as a note in the JES, UGA extension publication. The committee decided the GES website would be the best option but would discuss this at the final business meeting.

Scholarship Committee (Scott Horn on behalf of Gerald Harrison)—Danny Haelewater was selected as the recipient of the Ph. D scholarship. He does not attend school in Georgia but has worked in the USDA lab in Byron on a project with Ted Cottrell. Discussion centered around the eligibility of someone who has never attended a meeting, does not attend school in the state, and may not contribute to the state. The guidelines do not mention any of these in setting forth the eligibility of candidates. Another viable candidate was Anita Shrestha but she won the Ph. D award last year. Again, nothing in the guidelines restricts a candidate from winning an award twice. The committee voted to change the guidelines to

reflect the restriction on a candidate being eligible only once for each award. Sarah Braswell was selected as the recipient of the M.S. award.

Nominations Committee Report (Nancy Hinkle) – The committee asked Michael Toews and Wilson Faircloth to run for President-Elect. Stan agreed to serve a second 3-year term if there was no opposition at the final business meeting.

Historical Committee (Nancy Hinkle)—All of the historical records of the Georgia Entomological Society are stored in Nancy's office on the Athens Campus.

Program Committee (Will Hudson) –Deborah Harvey Graphics in Statesboro printed the programs; 90 copies were printed. Included were 5 papers in the Biting Flies of Georgia Symposium, 14 MS papers, 3 PhD papers, and 16 professional papers. There were 12 student posters and 5 contributed posters. The industry panel was given 45 minutes on the program. A discussion followed concerning the submission of a poster and paper on the same topic. After a lengthy discussion, it was voted to change the guidelines to say 'an author can serve as senior author on one poster or paper on a single topic at the meeting.'

Local Arrangements Report (Ed Mondor) – Registration was held in the hotel lobby from 4-6 pm. Registration on Thursday and Friday will be held in the conference center. Lunch will be held in the meeting room with a buffet line set up outside in the lobby. Student awards will be announced at the mixer.

Meeting Registration (Stan Diffie)— Thirty-nine regular members pre-registered for the meeting along with 22 students and 3 emeritus members.

Financial Report (Stan Diffie) – The financial report for 2014 was presented (attached). The audit committee had reviewed the books and had approved such. There was a \$600 profit last year which was a nice turn around from previous years. As of April 7, \$8300 in income has been collected in 2015.

Journal of Entomological Science Annual Report (Wayne Gardner)—The journal has experienced a decline in submissions the past couple of years. This is possibly due to the fact that the JES does not have a presence on the web. Wayne has agreed to stay on as editor during this time of change for the journal. Allen Press has been selected as the new publisher due to costs and quality. They will provide a peer track system and on-line publishing. The journal will incur an initial set-up cost of approximately \$5500. BioOne will partner with Allen Press which will reduce other costs associated with loading and tagging past issues. Wayne noted that the South Carolina journal receives royalties from BioOne which offset most of their bills. The association with BioOne should increase the impact factor and maybe membership. Wayne has been invited to a conference in Washington DC to further discuss the idea. The board voted to assist with costs associated with Wayne's travel.

Site Selection (Marianne Shockley) – Marianne presented 3 locations and asked that the committee narrow the choices to two prior to the business meeting. The choices included: (1) Lanier Islands. This venue would be very expensive for the society. (2) Brasstown Valley Resort & Spa. (3) Callaway Gardens. Executive Committee decided to ask the membership to choose between Brasstown and Callaway. Dates will be decided later.

Final Business Meeting Minutes

April 10, 2015. Villas by the Sea Conference Center, Jekyll Island, GA

Scott Horn presided over the Final Business Meeting of the 79th annual GES meeting. He complimented the society as a whole and singled out the work done by Will Hudson, Ed Mondor, Michelle Tremblay, and Stan Diffie during the year. He also offered congratulations to the winners of the Founder and Fellows Awards, as well as, the student award winners.

Reading of the 2014 Minutes were waived by a motion from Nancy Hinkle and second by Michael Toews.

Audit Committee (Stormy Sparks) – Stormy presented the audit report (attached).

Secretary/Treasurers Report (Stan Diffie) – The financial report covering activity in 2014 (attached) was distributed and discussed. Stan Diffie reported an operating surplus for 2014, the first year of operating in the black in recent years. He also recognized Ed Mondor and Michelle Tremblay in their initiative to provide supplies for the breaks. This resulted in an approximate savings of \$1750 for the society. Nancy Hinkle made a motion for Stan to serve a second 3-year term as Secretary/Treasurer. The motion was carried without opposition.

Insect Survey (Mark Abney) – Mark is seeking participation from members who have responsibilities in each of the areas covered in the survey. Dollar amounts will not be included in the reports if the individuals are uncomfortable with providing such. He suggested putting the survey on the web somewhere. David Riley suggested a numbered publication through UGA. Ash Sial offered the IPM website as an alternative. Stan will contact Cindy Tucker about using the GES website.

Golf Tournament (Phillip Roberts) – The golf tournament was cancelled again this year due to a lack of interest. The idea of changing to a fishing tournament was entertained (as was a bar sitting tournament).

Fun Run (John All) – Fourteen people enjoyed the Fun Run from the Villas by the Sea to the state park and back. Joni Blount finished first again this year. John All finished last on a bicycle. This was the 37th Fun Run which began on Hilton Head in 1979 in a competition with the South Carolina Entomological Society.

Site Selection (Marianne Shockley) – Marianne presented Brasstown Valley and Callaway Gardens as the two choices for the 2016 meeting. Brasstown rooms will be about \$169 per night including a resort fee and the meeting facilities will cost about \$5700. Callaway rooms will range from \$127 to \$163 and the meeting facilities will cost about \$4990. A brief slide show was presented of both locations. David Riley made a motion to meet at Callaway Gardens and it was seconded by Nancy Hinkle. A hand vote was taken and the motion passed. Marianne will serve as Local Arrangements chair.

Snapp Award – The Snapp Award, for best presentation by a regular member, was presented by Michael Ulyshen to Michael Toews.

Guidelines Committee (Jim Hanula) – There were no changes to the guidelines to report.

Nominations Committee (Nancy Hinkle) – the nominees for President-elect were Wilson Faircloth and Michael Toews. Ballots were distributed at the luncheon on Thursday. Votes were tabulated and Michael Toews received the most votes.

Journal of Entomological Science (David Buntin) – Wayne Gardner gave a lengthy presentation Thursday morning concerning the direction of the journal. David Buntin recognized Wayne and all of the time and energy he has spent working on this change from Sheridan Press to Allen Press and the work on securing an on-line distribution for the journal.

Resolutions (Michael Toews) – the resolutions (attached) were read.

Villas by the Sea gave the society a gift certificate for a two night stay due to the number of rooms rented during the meeting. A raffle was held and was won by Stormy Sparks.

Scott Horn passed the President's gavel to Will Hudson.

Will Hudson presented Scott Horn a plaque in gratitude for his service as GES President.

Necrologist Report (Stan Diffie)—a moment of silence was held for Harry Yates and Murray Blum.

New Business. Ed Mondor complimented John All on the design of the 2015 Fun Run t-shirts. The 16 extra shirts were sold at the meeting.

An announcement was made that the Executive Committee voted to limit students to winning each scholarship only once.

Meeting was adjourned.

GES Financial Report for period from December 31, 2013 through December 31, 2014

Assets	Dec. 31, 2013	Dec. 31, 2014
Checking	53201.45	45004.39
Pay Pal	5340.57	14149.60
Total	58542.02	59153.99

Income

Registration and Dues	6466.00	9685.00
Meeting Sponsors	2100.00	2000.00
Total	8566.00	11685.00

Expenses

Incorporation Fee	30.00	30.00
Bank checks		23.25
Bank account analysis fees	114.70	121.44
PayPal fees	186.91	295.97
JES	2500.00	2500.00
2014 Meeting Expenses		
Conference Center		4245.20
Supplies		599.20
Plaques		662.17
T-Shirts		320.80
Scholarships		1000.00
Awards		775.00
Total		10573.03
2015 Conference deposit		500.00

Current Assets (04/06/15)

South Georgia Bank	45894.17
PayPal	21284.46
Total	67178.63

**Report of the Audit Committee
Georgia Entomological Society**

The Audit Committee met with Stan Diffie, the GES Secretary-Treasurer, on April 7, 2015, to review the GES financial records for 2014. The Secretary-Treasurer provided bank issued monthly statements and a summary of PayPal transactions for the period covering January 1, 2014 through December 31, 2014. He also provided copies of receipts for non-award payments (business expenses) and a summary of assets, income and expenses for the period in question.

After review of these materials, we found the books of the Society to be in good order. In addition we examined and approved the one page summary of assets, income and expenses that will be distributed at the GES business meeting.

Alton N. Sparks, Jr.

Babu Srinivasan

**Report of the GES Resolutions Committee
April 10, 2015**

Whereas, the 79th Annual Meeting of the Georgia Entomological Society was convened April 8th, 2015 at the Villas by the Sea Resort at Jekyll Island, Georgia; and

Whereas, President Scott Horn, through dedicated hard work, organized and directed the Georgia Entomological Society during 2014-2015, and provided superb leadership for the 2015 Annual Meeting; and

Whereas, Will Hudson presented an excellent lecture to honor James D. Dutcher as the 2015 GES Founder Honoree; and

Whereas, Michael Ulyshen provided personal and heartfelt recognition of James L. Hanula, who was inducted as a Fellow of the Georgia Entomological Society; and

Whereas, Ed Mondor and the Local Arrangements Committee prepared an excellent foundation for holding the meeting; and

Whereas, President-Elect Will Hudson organized an excellent paper and poster session, and coordinated an interesting and informative symposium on "Biting Flies in Georgia" presented by Stacey Vigil, Daniel Hagan, Mark Blackmore, Elmer Gray and Joseph Iburg; and

Whereas, the industry sponsors, Amvac Chemical Corporation, Arysta LifeScience, Bayer CropSciences, Dow AgroSciences, Dupont Crop Protection, Nichino America, Syngenta Crop Protection, and United Phosphorus Limited generously provided refreshments during the 2015 Annual Meeting; and


Whereas, the membership of the Georgia Entomological Society is so dedicated to their profession and diligent meeting preparations that not a single one of them made time in to play golf at the historic Jekyll Island Golf Club; and

Whereas, the membership of the Georgia Entomological Society was so riveted by the scientific presentations that not even the lure of the beach on a sunny day could pull them away from the meeting; and

Whereas, the heating, venting and air conditioning system in the lecture hall blew loud and relentless throughout the entire 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 79th Annual Meeting.

Respectfully submitted,


Michael Toews, Chair


Mark Abney, Member

JOURNAL OF ENTOMOLOGICAL SCIENCE

2014 ANNUAL REPORT

Volume 49 of the *Journal of Entomological Science* was published in 4 issues which were mailed on 27 January 2014 (issue no. 1), 19 May 2014 (issue no. 2), 11 August 2014 (issue no. 3), and 10 November 2014 (issue no. 4). Cover photos for each of the issues were provided by Nancy Miorelli (no. 1), Cameron Prybol Nuss (no. 2), David A. McKinney (no. 3), and Raymond Hix (no. 4). These were selected from among the entries in the 2013 and 2014 GES Photo Salons.

There were 424 total pages with 31 scientific articles, 15 scientific notes, 4 author guidelines, and author and subject indices comprising the entire volume. For those 46 manuscripts published in volume 49, the average time from receipt of the manuscript to action taken on acceptance was 83 days. A summary of these data by volume from 2002 through 2014 is shown in Table 1 of this report.

During 2014, 41 manuscripts were submitted for publication in the Journal. The acceptance rate was 83%. A summary by year of total submissions, acceptance rate, and journal account balances and net income for 2002 through 2014 is shown Table 2 of this report.

Susan Thornhill, Business Manager, reported a balance of \$39,982.94 in the *Journal* account at Regions Bank (Griffin, GA) as of 28 February 2015. A summary of the deposits, disbursements, and balances for the Journal fiscal year is shown in Table 3 of this report.

Respectfully submitted this 8th Day of April 2015,



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 37 (2002) through volume 49 (2014).

Volume	Year	Scientific Articles	Scientific Notes	Total Articles	Total Pages	Time to Acceptance
37	2002	36	17	53	386	113 d
38	2003	62	17	79	720	141 d
39	2004	56	25	81	686	109 d
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

Table 2. Comparative summary report for *Journal of Entomological Science* manuscript submissions, acceptance rates, ending account balances, and net income by year for 2002 through 2013.

Year	Total Submitted	Accept Rate	Ending Balance	Net Income
2002	87	88%	\$20,518.10	(-) \$9,052.87
2003	89	90%	\$35,642.92	\$15,124.82
2004	67	80%	\$45,294.10	\$9,651.18
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

Table 3. Summary report of *Journal of Entomological Science* account with deposits, disbursements, and beginning and ending balances, 1 March 2014 through 28 February 2015.

Beginning Balance [3/1/2014]	\$40,461.84
Deposits (+)	28,313.21
Disbursements (-)	28,792.11
Ending Balance [2/28/2014]	\$39,982.94
Deposits	
Library Subscriptions	\$5,100.00
Publication and ePrint Charges	\$22,147.93
Royalties	\$1,065.28
Total Deposits	\$28,313.21
Disbursements	
Publication Printing & Mailing	\$26,840.93
VISA/MC/Discover Fees	\$1,766.18
Bank Fees	\$36.00
Total Disbursements	\$28,792.11

Award Winners
Georgia Entomological Society Annual Meeting
April 8-10, 2015, Villa by the Sea, Jekyll Island, Georgia

The following awards were presented at the 78th GES Annual Meeting:

Founder Honoree: Jim Dutcher
Founder's Lecture Will Hudson
Fellow of GES Jim Hanula

GES PhD Scholarship: Danny Haelewaters

GES MS Scholarship: Sarah Braswell

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

First Place: Tae Young Lee
Second Place: Danielle Rosensteel
Third Place: Sarah Braswell

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

First Place: Joni Blount
Second Place: Wendy Marchant
Third Place: Thuy- Vi Nguyen

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

First Place: Bethany Harris
Second Place: Ansley Silva
Third Place: Thomas McElrath

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

Winner: Michael Toews

Photo Salon Winners
Georgia Entomological Society Annual Meeting
April 8-10, 2015, Villa by the Sea, Jekyll Island, Georgia

Biology Category:

First Place: David McKinney
Second Place: Alan Harvey
Third Place: Alan Harvey

Microscope Category:

First Place: Anita Shrestha

Portrait Category:

First Place: Danielle Capps
Second Place: Danielle Rosensteel
Third Place: Alan Harvey

Sequence Category:

First Place: Wendy Marchant

Sturgis McKeever Award Best of Show Winner: Danielle Capps

2014 Georgia Entomological Society Arthropod Survey

Apple

Apple insect and mite IPM in GA has for several years been quite stable. Jim Walgenbach at NCSU continues to provide cooperative, as-needed research and extension support to the GA apple industry. Resistance problems with codling moth (CM, *Cydia pomonella*) and Oriental fruit moth (OFM, *Grapholita molesta*), our key fruit-attacking pests, have tended to be farm-specific. In many orchards insecticide applications timed by temperature-driven developmental models still provide excellent control of these key pests. However, significant GA apple acreage exhibits signs of resistance to phosmet (Imidan), methoxyfenozide (Intrepid) and/or novaluron (Rimon). Fortunately orchards experiencing faltering insecticide performance have gotten good to excellent CM/OFM control with pheromonal mating disruption.

Brown marmorated stink bug is readily evident in GA's mountain counties, but to date has not been problematic in apples, peaches or vegetables.

Woolly apple aphid (WAA, *Eriosoma lanigerum*) which has been well controlled in GA apples for at least 30 years has in recent years become problematic in isolated blocks. Betsy Beers, WSU, has shown that spinetoram (Delegate) is quite damaging to populations of the parasitoid *Aphelinus mali*. Elimination of spinetoram use, or restricting its use to late-season, seems to be allowing re-establishment of WAA biocontrol in GA apples, as problematic WAA infestations were reduced in 2014.

Blueberry

Since its first detection in the state of Georgia in 2011, spotted wing drosophila (SWD) remains the key pest of blueberries. Blueberry crop losses in 2012 and 2013 averaged around 20%. However, as a result of statewide educational programs through traditional (presentations at grower meetings at county level and train-the-trainer workshop series for extension agents at the district level) and digital means (UGA Blueberry Blog) blueberry growers' awareness of the problem has significantly increased which enabled them to implement management programs in a timely manner. Consequently, overall crop loss was much lower during 2014. On average, SWD management costs around \$100 per acre to blueberry growers.

Due to multiple applications of primarily broad-spectrum insecticides (OPs and pyrethroids) to control SWD, a significant increase in secondary pest problems, which include scales, aphids, thrips, gall midges, and bud mites, has recently been observed. This year approximately 10% of the blueberry acreage was treated with 1-2 insecticide applications to control these secondary insect pests. Unfortunately, the secondary pest problems will most likely get worse until alternative control strategies for SWD have been developed.

Corn

Very low infestations of stink bugs occurred in 2014, although preventive sprays were still used widely. Fall armyworm whorl infestations were larger and earlier than normal, and some acres were treated. Bt corn adoption is probably about 70 -80% in the state. Cost of Bt technology about \$16 to \$28 per acre depending on trait package.

Cotton

Thrips and stink bugs continued to be the primary insect pests infesting cotton during 2014. Mean insecticide applications were 2.7 per acre, mean percent yield loss to insect damage was 2.5, and mean losses + costs were \$87 per acre. Thrips populations were near normal but migration to seedling cotton occurred later in May than normal for the second consecutive year. Thrips management continues to be a priority and neonic seed treatments were supplemented with foliar sprays when populations are high. Stink bug infestations were moderate at best, but fields exceeded thresholds and insecticide applications were made. Spider mites are a pest we are monitoring closely, for several years a significant portion of cotton acreage has been infested (40 percent in 2014). However, only a small percentage of cotton has been treated for spider mites due in part to good management practices and avoiding insecticides prone to flare infestations. Other insect pests observed in cotton include corn earworm, beet and fall armyworm, tarnished and clouded plant bugs, cotton aphid, and silverleaf whiteflies.

Forest

Southern Pine Beetle Pheromone Trapping / Pine Beetle Aerial Survey

The Georgia Forestry Commission (GFC) participates annually in the southern pine beetle (SPB) trapping program. Insect traps are deployed in early spring by GFC foresters and are checked weekly for at least four weeks. In the spring southern pine beetle prediction survey, USDA Forest Service, Department of Defense (Fort Stewart), and Georgia Forestry Commission, established a total of 52 traps statewide. All prediction traps in Georgia indicated low SPB populations/activity for 2014. (See 2014 Southern Pine Beetle Prediction Map): <http://gatrees.org/forest-management/forest-health/pine-bark-beetles/2014%20Southern%20Pine%20Beetle%20prediction.pdf>

Two areas of the state saw noticeable beetle activity in 2014; Bryan and Glynn counties along the coast and Washington and Greene counties in the piedmont.

Nineteen Southern Pine Beetle spots were detected across the state; for a total of 49.4 acres. Early detection flights began on July 9, 2014 when pine bark beetle activity was reported in Glynn County, Georgia. Aerial survey crews conducted a systematic survey of coastal Georgia and found active pine bark beetle infestations on Saint Simons Island - 10 spots (41.6 acres), Richmond Hill - 5 spots (3.7 acres), and Fort McAllister State Park - 1 spot (3.1 Acres). The Southern Pine Beetle spots in Washington - 2 small spots (.5 acres) and Greene Counties - 1 spot (.5 acres) were associated with the February ice storm damage.

Ground crews conducted inspections of each area and determined the spots to be Southern Pine Beetle. Landowners were assisted in making sound management decisions, and each infested area has been harvested. Follow-up inspections were conducted to insure no infested trees were left with active beetles.

Redbay ambrosia beetle and laurel wilt disease are now established in over 40 counties in the state and they are now found in locations that contain sassafras only suggesting they will be able to spread throughout the state.

The emerald ash borer was found in the Atlanta area in 2013. It has now been recovered from 9 metro Atlanta counties.

The hemlock woolly adelgid entered the northeast corner of the state in 2003. It now occurs in all north Georgia counties where hemlock is a component of the forest.

Livestock, Poultry, and Pets

Beef Cattle

Horn flies are the main pest of pastured cattle, causing irritation and aggravation to cattle because of their blood-feeding habit. Horn fly suppression is dependent on insecticides, although there are few options that effectively reduce horn fly numbers for more than a few days. Nationwide, Georgia ranks 30th in cattle production, with just over a million head produced annually, amounting to a farm gate value of \$646 million. To control horn flies (and other ectoparasites such as stable flies, face flies, lice, etc.), Georgia cattlemen invest ca. \$5.7 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 \$4.7 billion annually, or 34% 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 wooden building structures and insulation to pupate, damaging facilities and lowering insulative capacity. Costs of repairs and insulation replacement 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. *Alphitobius* populations worldwide have been shown resistant to most of the pesticides registered for their suppression, so management strategies are extremely limited. Management tactics have some effect on beetle numbers, but there are no tactics that significantly reduce beetle populations.

All Georgia broiler houses are infested with darkling beetles and broiler producers spend approximately \$7.2 million annually for *Alphitobius* suppression. Losses to the beetles are estimated at \$3.5 million annually, for a total cost of lost production and control ca. \$10.5 million annually in the state.

Caged Layers

Table eggs are Georgia's 4th most lucrative commodity, with an annual value to the state of over \$798 million (ranking Georgia 7th nationally). The principal pest in caged layer houses is the house fly, 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 various pesticides to suppress house flies around caged layer operations. Worldwide, house flies have shown to be resistant to most insecticides, so control is seldom adequate. Losses due to flies combined with costs of management are estimated to total \$6.97 million annually.

Northern fowl mites 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 \$1.75 million annually, while suppression costs (primarily acaricides) are about \$1.7 million per year, totaling \$3.45 million statewide annually.

Pets

Approximately 3.5 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 treatments and disease preventatives amount to over \$128 million annually.

Pasture

Extensive fall armyworm infestations in grass pastures later in the summer needed control; pyrethroids were most commonly used.

Peach

Pest pressure from fruit-attacking insect pests [plum curculio (*Conotrachelus nenuphar*), assorted stink bugs, green June beetles] in peach orchards across GA & SC was light to moderate in 2014. 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 control is demanding but doable with rigorous application of dormant oils. Every acre needs to receive two dormant, dilute oil applications applied at a low tractor speed (2-3 mph). Aggressive follow up is required where ever control breaks are observed. Lesser peachtree borer control is stable where dilute, pre-bloom chlorpyrifos sprays are complimented by augmented cover sprays and post-harvest chlorpyrifos. The on-going re-registration of chlorpyrifos is expected to limit the number of applications of this key material.

Peachtree borer infestations are worsening. Peachtree borer populations (univoltine) are now showing the same upward population trends previously seen with the multivoltine lesser peachtree borer. Utilization of safer, but less effective, organophosphate-replacement cover sprays for the past 15+ years appears to be the key element in the emergence of these previously well-control species as primary tree-killing pests.

Pheromonal mating disruption of peachtree & lesser peachtree borers is effective in the Mid-Atlantic and Upper Mid-Western peach production areas, but this technology has struggled with our higher pest abundance, and longer, warmer growing seasons. Cottrell has for years worked to adapt mating disruption to the southeastern lesser peachtree borer/peachtree borer complex. There is optimism that Shin-Etsu's newest dispensers will last long enough to work under our conditions. In late winter of 2015 Cottrell initiated an 800+ acre, on-farm lesser peachtree borer/peachtree borer mating disruption trial in central GA.

A sap beetle (*Carpophilus* spp.)/picnic beetle (*Glischrochilus* spp.) complex has emerged in recent years as an occasional, but where abundant, very damaging pest of sound, ripening mid- and late-season peaches. Problems seem to be more severe in wet years. Support from the South Carolina Peach Council has facilitated preliminary work on insecticide bioassays, survey and implementation of sap beetle pheromone trap-and-kill technology used on stone fruit in western Australia. Initial trials trap-and-kill trials showed promise. Work examining the potential orchard floor sanitation will be begun in 2015.

Peanut

The 2014 peanut growing season began cool and wet with heavier and later than normal tobacco thrips, *Frankliniella fusca*, pressure. Thrips migration into peanut occurred in late May; heaviest infestations of immature thrips were observed in early June. From mid-June through the end of harvest in November, rainfall was scarce in most peanut growing areas, and the non-irrigated portion of the crop (~50%) suffered from the drought.

Three of the most important arthropod pests of peanut are typically more severe under hot, dry conditions. 2014 was an outbreak year for lesser cornstalk borer (LCB), *Elasmopalpus lignosellus*, and two spotted spider mite (TSSM), *Tetranychus urticae*. The peanut burrower bug (PBB), *Pangeaus bilineatus*, also thrives in hot, dry environments, and losses in Georgia from this insect were the highest since 2011. About 2.8% of Georgia's peanut crop was downgraded to segregation 2 in 2014. We estimate less than half of the segregation 2 peanuts were damaged by insects, but this still represents a significant economic loss for producers. LCB, PBB, and TSSM infestations in irrigated peanut fields were typically minor and in general did not require pesticide applications.

A variety of foliage feeding caterpillars was present in peanut in 2014. Pressure varied significantly by location, and while infestations may have been above normal, the number of acres treated with insecticide(s) for caterpillars was probably close to average.

Insect pressure in peanut was atypically high in Georgia in 2014 with most infestations and losses occurring in non-irrigated fields. Non-irrigated peanut yields ranged from 0 to over 5000 lbs/acre

depending on drought stress and pest severity. Yield of irrigated peanuts was exceptional in 2014; the state wide average yield over irrigated and non-irrigated fields was over 4000lbs/acre.

Pecan

The pecan crop was short due to a cool wet spring followed by very dry weather during the critical July-August period when nuts grow rapidly. Poor pollination reduced crop size and quality. Prices were strong for growers with a crop to sell. Aphids were the most problematic pest group, and many growers sprayed for scorch mites as well.

Sorghum

Sugarcane aphid infestations occurred on about 30K acres (essentially every sorghum field south of I20 in the state). Almost all acres were treated at least once, mostly with a Section 18 label for Transform WG @ about \$10 per acre. Fall armyworm in the whorl of later plantings needed control.

Soybean

Stink bugs and soybean looper were the primary insect pests infesting soybeans during 2014. Kudzu bugs were present but at very low levels, and only a few fields required treatment. Lesser cornstalk borer was a significant problem on late May and June planted soybeans.

Urban and Structural

The tawny crazy ant, *Nylanderia fulva*, has shown up in Albany (August 2013) and Camden and Glynn counties (August 2014). Hunch is that this major nuisance ant pest will be restricted to the lower half to one-third of GA and coastal GA.

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 will 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 intense), or averse to the liability, are not pursuing bed bug work. Although bed bugs get a lot of attention, termites and ants are still more profitable for most companies. On the pest control side, ants (Argentine ants) continue to be the number 1 pest encountered by companies who conduct residential pest control in GA. Bed bugs show up mainly in commercial accounts. Moreover, the bed bug problem in the south and southeast is not as bad as it is in the midwest and northeast. Attractants for bed bug traps is an active area of research. The "ClimbUp" pitfall trap continues to be the industry standard for traps. 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 no chemicals on the horizon that

will alleviate this situation soon. 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 all over the map when it comes to efficiency; the handler has proven to be a key to the success of dogs as inspectors.

Complaints about kudzu bugs were lower than previous years. Certainly the cold winter the past couple years has helped.

Vegetables

2014 was a relatively normal year for insect pests of vegetables.

The most pressing pest situation continues to be management of cowpea curculio in southern peas. This pest is resistant to all registered insecticides and threatens cowpea production in Georgia. Growers reported field failures with all registered insecticides even when applied on a two day spray schedule. Replicated efficacy trials have not been able to identify potential insecticides for cowpea curculio management.

Lepidoptera pest pressure was moderate in cole crops and greens. Diamondback moth was present in significant numbers (which differs from previous 3 years). While all insecticides showed respectable efficacy, less than expected efficacy was noted in commercial production and in replicated field trials. This reduced efficacy was noted even with our newest chemistries, the Group 28 insecticides.

Silverleaf whitefly populations were generally lower and later than expected in Tift and Colquitt Counties, where this pest is an annual pest in the fall vegetables. Insecticides showed little evidence of resistance issues with the neonicotinoids that have been experienced in the past. Tomato yellow leaf curl was noted in some fields but generally occurred late and had minor impacts on yield.

Thrips populations were relatively light in onions and minimal spraying was required. Tomato Spotted Wilt Virus was also of minor concern in 2014.

Twospotted spider mites required treatment in a variety of vegetables (mostly cucurbits) in early summer. This pest appears to be developing into a much more consistent problem than it has historically been.

Wheat

Some fields of susceptible varieties had significant Hessian fly damage in the spring. Aphids and barley/cereal yellow dwarf disease levels were low across the state.

Contributors: Mark Abney (peanut), G. David Buntin (corn, pasture, sorghum, wheat), James Hanula (forest), Nancy Hinkle (livestock, poultry and pets), Dan Horton (apple, peach), William Hudson (pecan), Phillip Roberts (cotton, soybean), Ash Sial (blueberry) Alton Sparks (vegetables), Daniel Suiter (urban and structural)

2015 Annual Meeting Registrations						
Regular members:		Regular Members (walk-up):			Student:	
Ahmad	Ashfaq	Abney	Mark		Allen	Daniel
Ames	Lisa	Beati	Lorenza		Beyer	Brendan
Balogh	Botond	Buntin	David		Blount	Joni
Barnes	Brittany	Eremeeva	Marina		Braswell	Sarah
Blackmore	Mark	Faircloth	Wilson		Bush	Bryana
Cottrell	Ted	Gardner	Wayne		Capps	Helaina
Cruz	Marianne	Guillebeau	Paul		Chen	Yi-an
Diffie	Stan	Harvey	Alan		Fair	Conor
Durden	Lance	Hudson	Will		Gochnour	Benjamin
Eger	Joe	Irby	Bill		Johnson	Allison
Fang	Quentin				Karcs	Cassandra
Gray	Elmer				Lado	Paula
Griffith	Keith				Lai	Pinchu
Hanula	Jim	Emeritus/Fellows/Retired:			Lee	Tae-Young
Harris-Schultz	Karen	Dutcher	Jim		Ludwig	John
Hazir	Selcuk	Hagan	Dan		Marchant	Wendy
Hinkle	Nancy	All	John		Miorelli	Nancy
Horn	Scott	French	Frank		Nguyen	Thuy-Vi
Iburg	Joseph				O'Neal	Allison
Lampert	Evan				Rosensteel	Danielle
Layton	Blake				Seabolt	Matthew
Li	Ming				Shrestha	Anita
Mondor	Edward				Silva	Ansley
Ni	Xinzhi				Studer	Liz
Orellana	Luis				Tremblay	Michelle
Owens	Clay					
Riley	David					
Roberts	Phillip					
Rucker	Keith	Spouses:				
Schmidt	Jason	Diffie				
Shapiro-Ilan	David	French				
Simmons	Breana	Gochnour				
Sparks	Stormy	Leite				
Suiter	Dan	Orellana				
Toews	Michael	Riley				
Ulyshen	Michael	Shapiro-Ilan				
Vigil	Stacey					
Zhang	Yanzuo					

**MEMBERSHIP OF THE
GEORGIA ENTOMOLOGICAL
SOCIETY**

Abney	Mark	regular		Cottrell	Ted	regular
Abraham	Cheri	student		Crossley	Dac	regular
Ahn	Kee-Jeong	regular		Dickson	Jenny	student
All	John	regular		Diffie	Stan	regular
Allen	Clint	regular		Dorfzaun	Alexandra	student
Allen	Daniel	student		Douce	Keith	regular
Allen	Margaret	regular		Dunford	James	regular
Ames	Lisa	regular		Durden	Lance	regular
Amis	Ann	regular		Durrence	Jessica	student
Anderson	Alyson	student		Dutcher	Jim	regular
Anderson	Jeremy	student		Eaton	Tyler	regular
Armstrong	Scott	regular		Eger	Joe	regular
Arrington	Brittany	student		Ekbom	Barbara	regular
Arthurs	Steven	regular		Eremeeva	Marina	regular
Avery	Pasco Bruce	regular		Evans	Mike	regular
Avgin	Sakine Serap	regular		Fair	Conner	student
Babb	Megan	student		Faircloth	Wilson	regular
Balogh	Botond	regular		Fang	Quentin	regular
Barnes	Brittany	regular		Farrar	Robert	regular
Beati-Ziegler	Lorenza	regular		Fettig	Christopher	regular
Beaton	Giff	regular		Flanders	Kathy	regular
Benedict	Mark	regular		Foltz	John	emeritus
Beyer	Brendan	student		Frank	Daniel	regular
Bhandari	Krishna	student		French	Frank	emeritus
Blackmore	Mark	regular		French	Ned	regular
Blount	Joni	student		Gandhi	Kamal	regular
Booker	Oliver	student		Gardner	Wayne	regular
Braman	Kris	regular		Gochnour	Benjamin	student
Braswell	Sarah	student		Googe	Katie	student
Brinkman	Mark	regular		Gray	Elmer	regular
Brissey	Courtney	student		Greene	Jeremy	regular
Brown	Ian	regular		Griffith	Keith	regular
Buckman	Michael	regular		Haelewaters	Danny	student
Buntin	G. David	regular		Hagan	Daniel	emeritus
Burns	Shuntele	regular		Hain	Fred	regular
Bush	Bryana	student		Hammes	Glenn	regular
Callcott	Anne-Marie	regular		Hanula	Jim	regular
Campagnoli	Sonia	regular		Harper	Stephanie	student
Capps	Helaina	student		Harris	Bethany	student
Carnagey	Daniel	regular		Harrison	Gerald	regular
Champagne	Don	regular		Harrison	John	regular
Chandler	Laurence	regular		Harris-Schultz	Karen	regular
Chen	Yi-an	student		Harvey	Alan	regular
Conway	Hugh	regular		Hazir	Selcuk	regular
Cook	Don	regular		Headings	Mark	regular
Cooper	William R	regular				

Heim	Craig	regular		Marasigan	Kathleen	student
Herbert	John	regular		Marchant	Wendy	student
Highland	Brett	regular		Mayfield	Albert	regular
Hinkle	Nancy	regular		McCravy	Kenneth	regular
Hirose	Yoshimi	regular		McElrath	Tommy	student
Hix	Raymond	regular		McHugh	Joseph	regular
Holloway	Jacob	student		McPherson	Robert	emeritus
Holt	Courtney	student		Mech	Angela	student
Horn	Scott	regular		Merrifield	Jimmy	student
Horton	Dan	regular		Miorelli	Nancy	student
Hudson	William	regular		Mitchell	Henry	regular
Hughston	Melanie	regular		Mitchell	Paula	regular
Hutchison	William	regular		Mizell	Russ	regular
Iburg	Joseph	regular		Mondor	Edward	regular
Irby	William	regular		Munro	Holly	student
Jenkins	Tracie	regular		Muzyk	Ken	regular
Johnson	Erica	student		Nair	Shakunthala	student
Jones	Cera	regular		Nalepa	Christine	regular
Jordan	Kyle	regular		Newsom	Larry	regular
Joseph	Shimat	regular		Nguyen	Thuy-Vi	student
Karcs	Cassandra	student		Ni	Xinzhi	regular
Kard	Brad	regular		Nims	Todd	regular
Kelly	Rosmarie	regular		Noblet	Ray	regular
Knight	Ian	student		Odom	C. Brian	regular
Kucuk	Roy	student		Oetting	Ronald	emeritus
Kuhar	Tom	regular		Oi	David	regular
Lado	Paula	student		Oliver	James	emeritus
Lago	Paul	regular		Oliver	Jason	regular
Lai	PinChu	student		Orellana	Luis	regular
Lampert	Evan	regular		Osbrink	Weste	regular
Layton	Blake	regular		Osting	Cody	student
Lee	Cathy	regular		Owens	Clay	regular
Lee	Tae-Young	student		Parks	Melissa	student
Legarrea	Saioa	student		Perkins	Gretchen	student
Leite	Luis	regular		Perry	Kayla	student
Li	Ming	regular		Peterson	Lance	emeritus
Liang	Ai-Ping	regular		Pfannenstiel	Robert	regular
Lim	Su Yee	regular		Philips	Christopher	regular
Little	Brian	student		Pilkay	Grant	student
Lohmeyer	Kimberly	regular		Podgwaite	John	regular
Lowman	Alan	regular		Quisenberry	Sharron	
Ludwig	Scott	regular		Ramoutar	Darryl	regular
Ludwig	John	student		Reding	Michael	regular
Luttrell	Randy	regular		Reid	Ashlin	student
Maner	Luke	student		Richburg	John	regular
Mangini	Alex	regular		Richman	Dina	regular

Riffle	Michael			Thompson	Lynne	emeritus
Riley	David	regular		Thompson	Melissa	student
Robbins	Paul	regular		Tietjen	William	emeritus
Roberts	Phillip	regular		Tillman	Glynn	regular
Robertson	Derek	student		Timer	Jody	regular
Robertson	Robert	emeritus		Toews	Michael	regular
Roden	Ashley	student		Townsend	Monica	regular
Rodenberger	Kathryn	student		Tremblay	Michelle	spouse
Rosensteel	Danielle	student		Turnbow	Robert H	regular
Royal	Stanley	regular		Ulyshen	Michael	regular
Ruberson	John	regular		Vigil	Stacey	regular
Rucker	Keith	regular		Walker	Max	emeritus
Santana	Fred	regular		Walters	Miranda	student
Scheffrahn	Rudolf	regular		Wei	Xing	regular
Schmidt	Jason	regular		Westberry	Lisa	regular
Schuster	David	emeritus		Williams	Elizabeth	regular
Seabolt	Matthew	student		Wimmer	Jessica	student
Sedlacek	John	regular		Young	Orrey	emeritus
Seiter	Nicholas	student		Zhang	Yanzhuo	regular
Semtner	Paul	emeritus				
Shapiro-Ilan	David	regular				
Shockley	Marianne	regular				
Shrestha	Anita	student				
Sial	Ashfaq	regular				
Simmons	Alvin	regular				
Simmons	Breana	regular				
Smith	Clyde	regular				
Smith	David	emeritus				
Smith	Jeffrey	regular				
Smith	Ron	emeritus				
Smyth	Linda	emeritus				
Sparks	Alton, Jr.	regular				
Sparks	Beverly	emeritus				
Spurgeon	Dale	regular				
Srinivasan	Babu	regular				
Stewart	Colin	regular				
Stewart	Julia	regular				
Studer	Liz	student				
Suiter	Dan	regular				
Sullivan	Brian	regular				
Swain	Hilary	regular				
Taylor	Dennis	regular				
Taylor	Mickey	regular				
Taylor	Shine	regular				
Tedders	Walker	emeritus				
Thomas	Donald	regular				

Georgia Entomological Society 2015 Annual Meeting Financial Report

The 79th Annual Meeting held at Villas by the Sea, Jekyll Island, Georgia.

GES Meeting Financial Report:

Income

Industry Support	\$1,950.00
Registration	
Full (43 at \$150)	6,450.00
Emeritus (4 at \$50)	200.00
Student (22 at \$25)	550.00
Spouses (6 at \$25)	150.00
Total Income	\$9,300.00

Expenses

Rainwater Conf. Ctr.	\$4303.66
Programs (printing)	478.20
Plaques	682.92
Awards	775.00
Scholarships	1000.00
Fun Run	343.20
Meeting supplies (breaks)	355.95
PayPal fees (meeting only)	251.60
Total Expenses	\$8190.53

<u>Income - expenses</u>	\$1109.47
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